PSYCHOLOGY IN THE SCHOOLROOM

BY

T. F. G. DEXTER, B.A., B.Sc., Ph.D.

PRINCIPAL OF ISLINGTON DAY TRAINING COLLEGE

AND

A. H. GARLICK, B.A.

HEAD MASTER OF THE WOOLWICH PUPIL TEACHERS' SCHOOL

Author of "A New Manual of Method," etc.

NEW IMPRESSION

LONGMANS, GREEN AND CO.

39 PATERNOSTER ROW, LONDON, E.C. 4

NEW YORK, TORONTO

BOMBAY, CALCUTTA AND MADRAS

1923

PREFACE.

MANY students have little difficulty in mastering the general principles of the Science of Psychology, but experience considerable difficulty in applying those principles to the Art of Teaching; and it is because special attention has been paid to the *application* of the subject that it is hoped that this book will be of some service, not only to the student and young teacher, but also to teachers generally.

It has been thought advisable to exclude polemical discussions, since they are believed to be out of place in this elementary book, which is an attempt to apply the laws of Mental and Moral Science to school work—to take the elements of Psychology into the Schoolroom.

T. F. G. D.

A. H. G.

CONTENTS.

PSYCHOLOGY IN THE SCHOOLROOM.

CHAPTER I.

THE SCIENCES OF PHYSIOLOGY AND PSYCHOLOGY.

We have all heard of *Physiology* and know that it is called a *Science.* We know too that Physiology deals with the functions of the various parts of the body. By casual observation men have learned some elementary facts regarding the working of the body, *e.g.*, that the heart beats, that the lungs take in air, etc. Such knowledge is called *Common Knowledge*. But many errors exist in common knowledge; thus, it is popularly supposed that the heart is on the left of the chest. *Common Knowledge then needs correction.* Again common knowledge does not go very far. Every one knows that the lungs take in air, but comparatively few understand what purposes are served by respiration. *Common Knowledge then needs amplification and extension.* **Common Knowledge made more precise, more extensive and more systematic is called Science.**

We all know we have a something within us which feels, and thinks, and acts, and we call this something the *Mind.* Now we can study the mind in much the same way as we can study the body. We can begin with popular ideas about the mind, we can examine them, correct them, extend them, classify them, and arrive at a science which deals with the workings of the mind. This science is called **Mental Science or Psychology.**

Thus we have :—

Physiology.	*Psychology.*
The Science dealing with the working of the *Body.*	The Science dealing with the working of the *Mind.*

CONSCIOUSNESS.

A girl in class loses her colour; her head bends forward; she falls to the ground. *She is fainting.* Her breathing becomes less regular and appears to cease. *She has fainted.* The teacher goes to her aid, but the girl does not *see* or *hear* her. Water is dashed on the girl's forehead, but she does not *feel* it. *She is unconscious.* Her mind is apparently not working. By-and-by a tremor passes over her, she opens her eyes, and gradually begins once more to feel and think. *She is restored to consciousness, i.e.,* her mind once again performs its usual functions.

Consciousness is the general name for all possible mental operations.

"Consciousness is the word which expresses in the most general way the various manifestations of psychological life. It consists of a continuous current of sensations, ideas, volitions, feelings, etc." (Ribot.)

Part of an ordinary definition consists in showing that the thing defined belongs to some larger class. But consciousness cannot be defined in this way, because there is no more general term under which it may be brought.

Consciousness is a characteristic of the mind, just as extension is of matter. Consciousness is the ultimate fact of mental life.

The term consciousness must not be confused with *conscientiousness*, a word having reference to the *conscience*, and not directly to conscious life.

DEFINITION OF PSYCHOLOGY.

We will now define psychology more accurately:—

(1) **Psychology is the Science of Consciousness.**

(2) **Psychology is the Science which describes, classifies and explains our mental operations.**

(3) Psychology is "our general knowledge of mind reduced to an accurate and scientific form." (Sully.)

Psychology is a natural science just as physiology and chemistry are natural sciences. The chemist resolves compounds into their elements, the anatomist dissects the body into its simple tissues, the psychologist "dissects" mental phenomena into elementary states of consciousness.

RELATION OF PSYCHOLOGY TO TEACHING.

A man to be a good physician must have among other things an accurate knowledge of the various operations of the *body*. Similarly one who is to be a good teacher must have among other things a sound knowledge of the operations of the *mind*. What physiology is to the doctor psychology is to the teacher. But a profound psychologist need not be a good teacher. Psychology is a science; teaching is an art. We learn an art *by doing*. No one can become a cricketer by merely reading books on the playing of cricket; no one can become a teacher by merely reading works on psychology. The laws of psychology furnish many rules for teaching. A teacher who knows something of the science upon which the art of teaching is based will avoid many of the errors of a purely empirical method, and will teach with greater profit to his pupils and greater pleasure to himself than one who merely applies rule-of-thumb maxims, the reasons for which he does not understand. Psychology places the work of the teacher upon a rational and scientific basis.

MEANS OF ACQUIRING A KNOWLEDGE OF MIND.

I can study my own mind or I can study the minds of others. Hence there are two great methods :—

I. **The Subjective Method.**—The study of my own mind, often called *Introspection*.

II. **The Objective Method.**—The study of the minds of others.

By *subjective* is meant anything belonging to or existing only in my mind; by *objective* is meant anything else.

THE SUBJECTIVE METHOD.

The student examines his own states of consciousness in a series of "self-studies" or "subject-lessons." "Object-lessons give a direct knowledge of the matter-world, while *subject-lessons* give a direct knowledge of the mind-world." (Baldwin.)

The peculiar difficulty of the method is the fact that the observer has, as it were, to split himself into two—to be both the observer and the observed.

The peculiar defect of the method is the uncertainty and variability of the standard. The physicist refers everything to the gram, the metre and the second. These are absolute standards; they mean the same to all scientists. But when one man reads a work on psychology he refers all the theories *to his own mind;* when another reads the same work he refers all the theories *to his own mind.* Now, no two minds are the same; that is, the standard of reference in each case is different; hence what each understands is not the same. No two men think exactly the same things about the functions of the mind. *Each thinker has to elaborate his own psychology.* Just as no two men have ever seen the same rainbow, so no two men have ever thought out the same science of psychology. Still, what one man thinks is sufficiently like what another man thinks to form a basis of agreement for all ordinary purposes.

THE OBJECTIVE METHOD.

This easily divides itself into the *Method of Observation* and the *Method of Experiment.*

A. *Method of Observation.*—Men give signs as to what their own mental states are. When I have observed the signs of others, and have examined my own mental states, I am better able to infer the mental states of others. The teacher's special work in this connection is to observe the working of the minds of children. The diseased minds of idiots, the poorly developed minds of savages, can be made subjects of study under the *direct* method of observation. I can also observe *indirectly* or through others by the study of biography and literature.

B. *Method of Experiment or Psycho-physics.*—This is the newest branch of the objective method. It presupposes a knowledge of the nervous system, and endeavours to perform experiments upon the mind in much the same way as

the physiologist performs experiments upon the body. The student is referred to p. 63 for an example of the experimental method.

CHARACTERISTIC DEFECTS OF THE OBJECTIVE METHOD OF THE STUDY OF PSYCHOLOGY.

We cannot study the minds of others directly. We can study only certain bodily signs which we assume to be manifestations of certain mental states, and from those bodily signs we *infer* what the state of the mind is. Now we cannot be sure that these bodily signs are really caused by the supposed mental state. An actor can play light comedy when his heart is as heavy as lead. Then again there is always a tendency to project our own modes of feeling and thinking into the minds of others. The generous-minded man assumes that others are generous-minded too. The mean, spiteful man regards the actions of others as being as mean and spiteful as his own. Much bad reasoning regarding children comes about in this way. Adults are too apt to project their own minds into the minds of children.

Psychological Importance of the Study of Children. The child is the chief concern of the teacher. Too many of us project a number of our own states of consciousness into the child, and then imagine that we know something of him. We want to get at what the child is, not what we think he is. At present "the child is but half discovered." Psychology points out to us the way to the mind of the child. We cannot hope to educate the child properly until we have found out what he really is. When we have done this as well as our finite powers allow us, psychology further points out to us the true method for the development of the mind of the child.

The Peculiar Difficulties of the Study of the Minds of Children.

1. *During the first period of existence the child is unable to speak*, and is quite unable to perform acts of introspection.

2. *Children are born actors.* If they think they are

being observed they act quite differently from what they do under ordinary circumstances. They love to seem wise, to prove themselves interesting, to imitate their elders. Consequently, if we are not careful we find ourselves observing not a child but a poor copy of a man.

3. *Children are often bashful.* They are afraid to tell their experiences for fear of being laughed at. Many childish experiences reach us only through the faulty medium of adult memory.

A GOOD OBSERVER OF CHILDREN SHOULD HAVE:—

1. *A lively memory of his own childhood*, in order that he may be able to reproduce accurately the mental states of that period.

2. *The gift of sympathy.* It is quite possible to recall a mental state without entering into it, or sympathising with it. It is necessary to enter into the pleasures and pains of the child, to be mentally "born again" and "become as a little child."

3. *A psychological training*, in order that he may be able to accurately gauge the results of his observations.

DEFINITION OF MIND.

I feel: I think: I will. These words express the main facts in my mental life. If I am asked what part of me feels and thinks and wills, I answer—the Mind. The Mind is then the feeling, thinking, willing part of me. More exactly, **the Mind is that which manifests itself in our processes of knowing, of feeling and of willing.** What Mind *is* in itself we do not know. We know only what it *does*.

The terms *soul, spirit, ego, self, subject*, are sometimes used as synonymous with mind. Mind is contrasted with matter. Matter occupies space; its special quality is *Extension*. Mind does not occupy space, it is *unextended;* its special property is *Consciousness*. Matter is something outside us; it is *objective*. Mind is something within us; it is *subjective*. Mind has reference to the ego, to the self. Matter has reference to the non-ego, to the not-self.

Mind is often used in a much narrower sense. Thus we speak of a strong-minded woman, *i.e.*, one of great will power, and of a man of great mind, *i.e.*, one of unusual intellectual ability.

CONNECTION BETWEEN MIND AND BODY.

The body is the means of communication between the mind and the outside world. Through the body the mind acts upon the outside world; through the body the outside world acts upon the mind. But the body is more than an intermediary between mind and matter. Between mind and body there is an intimate though mysterious interdependence.

Mental activity has as its concomitant some mode of physical activity. Hope, despair, joy, sorrow have their characteristic bodily signs.

Then again *mental activity is largely dependent on* the special form of *bodily activity.* Thus, sensations are largely dependent on the physical state of their special organs. A cold in the nose temporarily deprives us of the sense of smell. The influence of body on mind is seen elsewhere than in sensation. Our acts of volition depend on the state of the muscles. A feat of strength impossible at the end of a day of toil is accomplished without difficulty after a night's rest. Even limited observation convinces us that mental vigour is largely dependent on bodily vigour. The healthy mind is one of the effects of the healthy body. **The body is thus something more than a servant of the mind; it is one of the determining factors of mental states.** Hence—

A KNOWLEDGE OF THE NERVOUS SYSTEM IS NECESSARY FOR THE COMPREHENSION OF THE FUNCTIONS OF THE MIND.

The part of the body most intimately connected with the mind is the brain. The brain is the chief part of the nervous system. Even a brief study of the nervous system will do something to help us to understand the working of the mind.

THE NERVOUS SYSTEM.

THE NERVOUS SYSTEM consists of two parts: the cerebrospinal system and the sympathetic system.
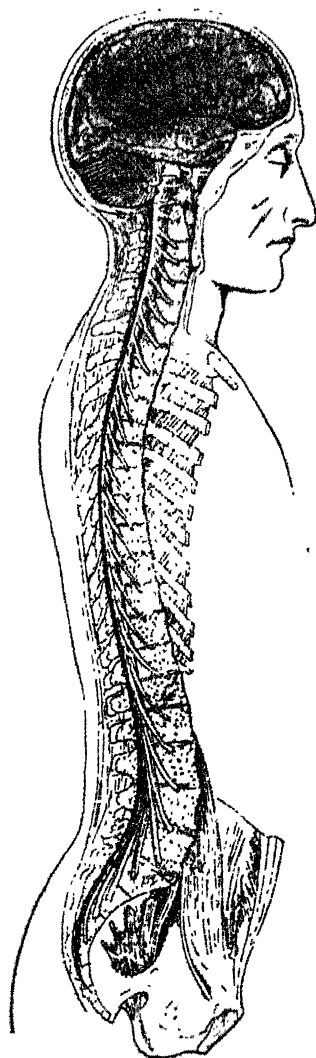
Fig. 1.—The Cerebro-Spinal Cavity and its Contents.
F, T, O, cerebrum; c, cerebellum; mo, medulla oblongata; ms, spinal cord.

The Cerebro-Spinal System consists of:—

(*a*) **The Central Organs.**—Cerebrum, cerebellum, medulla oblongata and spinal cord. Their relative positions can be learned from Fig. 1.

(*b*) **The End Organs,** situated in the sense organs, muscles, etc.

(*c*) **The Connecting Organs,** joining the end organs with the central organs in two ways:—

1. *As Afferent Nerves* bearing impulses *to* the central organ from the end organs.

2. *As Efferent Nerves* bearing impulses *from* the central organ to the end organs.

This arrangement is represented graphically in Fig. 2.
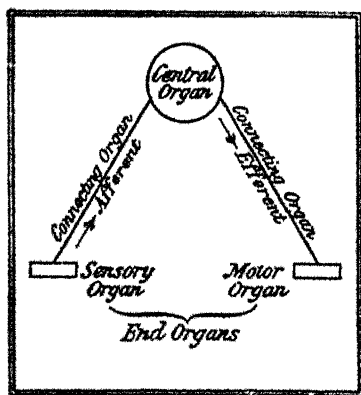
Fig. 2.

The end organs connected with afferent nerves are as a rule *Sensory*, those connected with efferent nerves are as a rule *Motor* in their functions (see p. 15).

The Sympathetic System is situated on each side of the backbone or vertebral column. Branches from this system ramify to the heart, stomach, etc., and do much to control these organs. The sympathetic system is concerned more closely with our bodily than with our mental life, and the consideration of it need not detain us.

Rudimentary Ideas of the Functions of Central End and Connecting Organs.

The sensory organ is especially fitted to receive certain impressions of the outside world. The impressions may be said to be generally conveyed to the end organ in the form of *vibrations*, which the *End Organ* transmits to the *Afferent Nerve*. The afferent nerve conveys these vibrations to the *Central Organ*. The central organ interprets these vibrations and sends vibrations along the *Efferent Nerve* to the *other End Organ*, which is set into action in some special way by these vibrations.
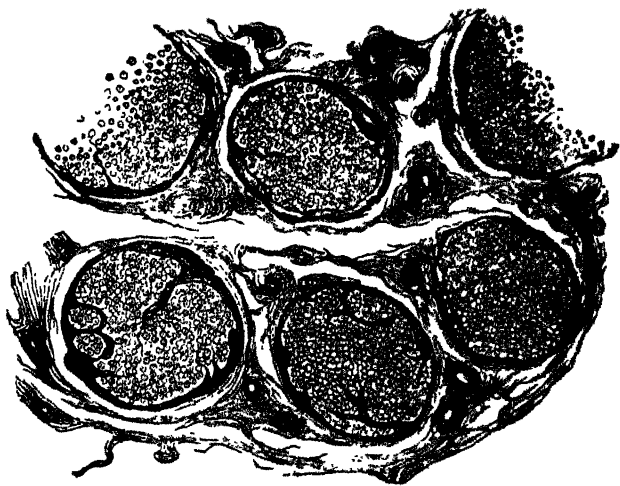
Fig. 3.—Section of a Part of the Median Nerve (Human). Drawn as seen under a low magnifying power. (From Landois, after Eichhorst.)

The Nervous Tissue of the cerebro-spinal system is of two kinds :—

I. **White Matter,** consisting of *Nerve Fibres*.
II. **Grey Matter,** consisting of *Nerve Fibres* and *Nerve Cells*.

NERVES consist of white matter. A nerve in (say) the arm is a white-looking cord which appears to be of the same

structure throughout. The microscope, however, shows that it is composed of a large number of *Nerve Fibres*, each of which is capable of conveying vibrations. Fig. 3 shows a cross section of part of a *Nerve*. It contains six *Nerve Bundles* in whole or in part, and each nerve bundle shows the cut ends of numerous *Nerve Fibres* represented in the figure by minute circles with dots at their centres.

The same nerve may contain both afferent and efferent nerve fibres. In Fig. 2 the afferent and efferent tracks are separated merely for the sake of greater clearness.

Nerve Cells are minute, irregular bodies containing nuclei. (Fig. 4.)
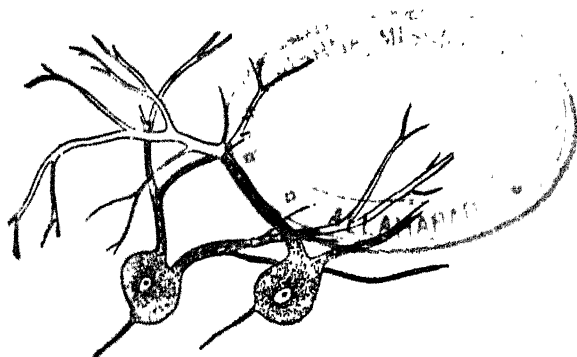
FIG. 4.—NERVE CELLS FROM THE GREY MATTER OF THE BRAIN.

THE BRAIN is enclosed in the cranium or skull. It consists of several parts, the chief of which are the cerebrum, the cerebellum, the pons varolii and the medulla oblongata. (Fig. 5.)

The Cerebrum, situated in the upper and front part of the cranium, consists of two hemispheres separated by a fissure. Its surface is much convoluted. The grey matter is external, the white internal.

The cerebrum gives off twelve pairs of *Cranial Nerves*, of which the *Olfactory* (first pair), the *Optic* (second pair), the *Auditory* (eighth pair) and the *Glossopharyngeal* (ninth pair), are the most important from a psychological point of view.

Functions.—The cerebrum is the *seat of sensation, reasoning, emotion and volition.* These powers would seem to reside in the grey matter.

Proofs.

(1) There is a general connection between the mental powers and the size and development of the cerebrum. The average white man has a larger and more fully developed cerebrum than the average negro; the negro a much larger cerebrum than the ape; and generally the more intelligent the animal the larger and the more highly developed the brain.
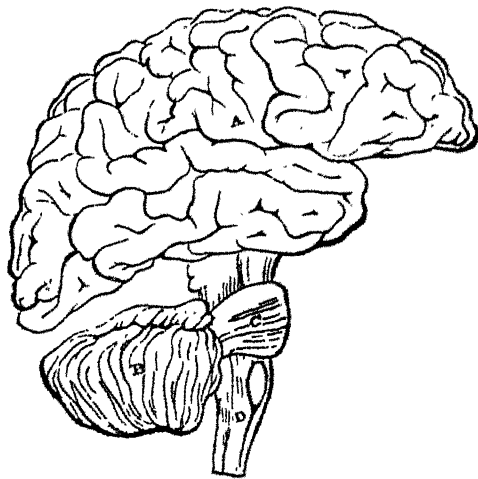
Fig. 5.—The Human Brain.

A, cerebrum; B, cerebellum; C, pons varolii; D, medulla oblongata. The parts are represented as separated from one another something more than is natural so as to show their relation better.

(2) Disease or injury of the cerebrum (particularly of the grey matter) leads to partial or complete suspension of the higher processes of mind.

The Cerebellum or little brain consists of two hemispheres, and is situated below the hinder part of the cerebrum. The grey matter is external; the arrangement of the

white matter is such that it presents a tree-like appearance when viewed in cross section. (Fig. 6.)

Functions.—*The regulation and co-ordination of muscular movement.* The cerebellum does not *originate* muscular movement; that is one of the functions of the cerebrum. It is the servant of the cerebrum, and carries out in a methodical and systematic manner the behests of its master.

Proof.—Disease of the cerebellum in man leads to a staggering gait and partial or total loss of the power of controlling the muscles.
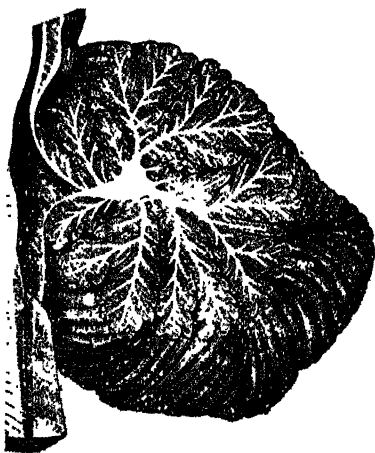
Fig. 6.—Section through the Cerebellum.
Showing the peculiar arrangement of the white and grey matter, forming what is known as the *arbor vitæ* (tree of life).

The Medulla Oblongata is situated in the lowest part of the cranium, is pyramidal in shape, and may be regarded as a bulb or prolongation of the spinal cord. The grey matter is internal, the white external.

Functions.—(1) *It is a conductor between the spinal cord and the cerebellum and cerebrum.*

(2) *The Nerve Centres which it contains control respira-*

tion, circulation, swallowing, etc. It is thus a centre for reflex action, which however is better studied in connection with the spinal cord.

Proofs.

(1) All the nerve fibres from the cord to the brain proper and *vice versâ* pass through the medulla oblongata.
(2) Its destruction invariably results in instant death.
(3) Moderate stimulation of the respiratory centre of the medulla leads to changes in respiration.
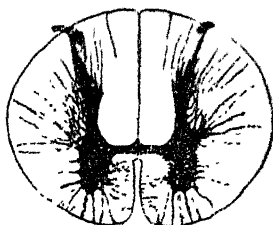
Fig. 7.—Transverse Section of the Spinal Cord.
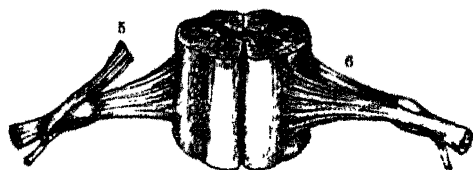
Fig. 8.—Roots of Spinal Nerves issuing from Cord. The Right Anterior Root has been Divided and Turned Upwards.

THE SPINAL CORD is a column of nervous tissue filling the canal which runs through the greater part of the vertebral column. It gives off thirty-one pairs of *Spinal Nerves*, which must be carefully distinguished from the cranial nerves (p. 11). Each nerve has two roots—an anterior root and a posterior one: the latter possesses a ganglion. A transverse section of the cord shows that the grey matter is arranged in the interior in two crescents (Fig. 7), the four horns of which communicate with the four roots which form a pair of spinal nerves. (Fig. 8.)

Functions of the Anterior and Posterior Roots.—If the posterior root of a spinal nerve communicating with the leg be irritated at the point marked 6 (Fig 8) pain is felt *in the leg* and movement of the leg follows. It must be distinctly noted that the pain is felt, not at the point of irritation, not in the cord, but *in that part of the periphery in which the fibres of the nerve terminate.* The irritation of the nerve fibre causes its particles to vibrate, and those vibrations are carried by the nerve to the cord, and by the cord to the brain, which interprets these vibrations as coming from that spot (the leg) from which on previous occasions similar vibrations have come. If the anterior root be severed as at 5 (Fig 8) and the posterior root be stimulated, pain is felt as before, but there is no movement. From these and similar experiments we infer that afferent impulses (resulting generally in sensation) travel along the posterior root, and that the efferent impulses (resulting generally in motion) travel along the anterior root Hence the terms sensory and motor are sometimes applied to the posterior and anterior roots respectively. **These considerations teach us too that the seat of sensation is not in the sense organ but in the brain itself.**

FUNCTIONS OF SPINAL CORD.

1. *It is a conductor of Nerve Impulses from all parts of the body (the head excepted) to the brain.*

Proof.—Injury to the cord leads to partial or total loss of sensation and voluntary movement in those parts of the body receiving their nerves from below the point of injury.

2. *It is the centre of Reflex Action.*

Proof.—A man whose spinal cord has been injured (say in the lumbar region) loses all control of his legs. If his feet be tickled he feels no pain, yet he withdraws them violently even though he may wish to keep them still.

Reflex Action.—From the above we infer that the cord possesses the power of converting afferent into efferent impulses without the aid of the cerebrum. We have too an example of an afferent impulse which does not lead to sensation, and we learn that the term sensory is not so good as afferent when applied to impulses travelling to the brain.

Reflex Action is that power possessed by the Spinal Cord and Medulla Oblongata of transforming Afferent into Efferent Impulses without the interposition of the Brain.

The afferent impulse, instead of travelling *viâ* the cord to the brain, takes, as it were, a short cut through the cord, *is*

acted upon by the cord, and is transformed into an efferent impulse. In Fig. 9, A B C D represents the path in reflex action, A B E F C D represents the path in conscious action.

The Energy of Nervous Matter: Necessity for Rest and Nutrition.—Energy means the capacity for doing work. Gunpowder has energy stored in it. When a gun is loaded and fired, the energy leaves the gun and does the work of propelling the bullet. A nerve cell may be compared with a gun. A nerve cell has certain chemical compounds within it which constitute its energy. These
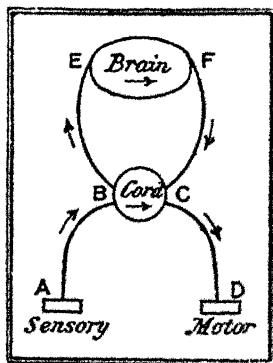
Fig. 9.

chemical compounds in undergoing decomposition do work. When the nerve cell has discharged its energy it must be recharged before it can act again. Hence the necessity for rest for the nerve cell. The nerve cell is recharged by materials brought by the blood. The purer and richer the blood, the sooner and the better will the nerve cell be recharged. Now pure and rich blood depends mainly on good *food* and fresh *air*. What is true regarding one nerve cell is true of practically the whole nervous system. Hence for proper mental work we must have good food, pure air and appropriate times for rest.

Summary.

Consciousness is the general name for all possible mental operations.

Psychology is the science of consciousness.

Methods of studying Psychology.

1. *Subjective Method:* study of mind of *self*.
2. *Objective Method:* study of minds of *others*.

Mind is that which manifests itself in our processes of knowing feeling and willing.

The mind is intimately connected with the nervous system.

Nervous System.

- I. Cerebro-Spinal System.
  1. Central organ: brain.
  2. End organs: sense organs and muscles.
  3. Connecting organs: efferent and afferent nerves.
- II. Sympathetic System.

		Organ.	Position.	Distribution of Nerve Tissue.		Functions.
				Grey.	White.	
Cerebro-Spinal Axis.	Brain.	**Cerebrum.**	Upper part of cranium.	Outside.	Inside.	Seat of feelings, intellect and will.
		Cerebellum.	Lower and hinder part of cranium.	Outside.	Inside.	Co-ordination of muscular movements.
		Medulla Oblongata.	Lowest part of cranium.	Inside.	Outside.	(*a*) Respiratory and circulatory centre. (*b*) Conducting.
		Spinal Cord.	In vertebral column.	Inside.	Outside.	(*a*) Reflex action. (*b*) Conducting.

Reflex Action.—The power possessed by the cord and medulla of transforming afferent impulses into efferent ones without the aid of the brain.

The Seat of Sensation is not the sense organ but the brain itself.

Efficient Mental Work requires (1) good food; (2) pure air; (3) rest.

QUESTIONS

1.—Distinguish between physiology and psychology

2.—Define psychology. Of what practical use is the study of psychology to the teacher?

3.—Define mind. What are the difficulties of studying mind?

4.—Why should the study of physiology precede the study of psychology?

5.—Draw a diagram showing the structure of a nerve of the cerebro-spinal axis

6.—Name the three chief divisions of the brain, and describe their functions

7.—What are the functions of the spinal cord? What reasons have we for attributing those functions to the cord?

8.—Distinguish between cranial and spinal nerves. Name the chief cranial nerves

9.—"It is the brain that sees and not the eye." Comment on this statement

10.—What is reflex action? Give two examples of reflex action.

11.—How is it that a man in a fit, though quite unconscious, may go on breathing regularly?

12.—How do we know that the nerve fibres which are set in motion when a limb is moved are different from the nerve fibres set in motion when pain is felt?

13.—"A sound mind in a sound body." Explain this.

14.—Discuss the truth of the proverb, "All work and no play make Jack a dull boy"

15.—It is said that every teacher ought to be a good observer of children. Explain this saying and show what is implied in good observation of children's minds. (C.P.)[1]

16.—Mention some of the most important conclusions of physiology with reference to the relation of body and mind Deduce therefrom some rules for your guidance in the classroom. (C.U.)

[1] *Contractions.*—C.P. = College of Preceptors.
C U. = Cambridge University
E.D. = Education Department.
L.U. = London University.
V.U. = Victoria University.

CHAPTER II.

THE THREE PHASES OF MIND.

The operations of the mind are exceedingly varied and complex, but modern psychologists are agreed that there are three leading states of consciousness :—

I. **Feeling or Emotion,** which includes all pleasurable or painful conditions of mind. *Thirst, Sight, Love, Anger,* are Feelings.

II. **Knowing or Intellect,** which includes all operations connected with the discrimination of one state of consciousness from another. *Memory, Imagination, Reasoning,* are forms of Knowing.

III. **Willing or Volition,** which includes all mental operations leading or tending to lead to action. *Attention, Impulse, Resolution,* are forms of Willing.

Sometimes they are spoken of as *Functions* of the mind, *i.e.*, as certain operations which the mind performs. More frequently they are regarded as *Faculties* of the mind.

A mental faculty is the power the mind has of acting upon "objects" and discriminating them from one another.

Feeling, knowing, willing, are not different parts of mind, but are merely different *Phases* or forms of activity of one and the same mind.

FEELING, KNOWING AND WILLING ARE CONNECTED.

(*a*) A boy falls down in the playground and hurts himself. I am sorry for him (*Feeling*) ; I look at the injured part and see that it should be bound up (*Knowing*) ; and I proceed to do it (*Willing*).

(*b*) I hear that a friend has passed a difficult examination (*Knowing*); I rejoice at his success (*Feeling*); and hasten to send him a congratulatory telegram (*Willing*).

From these and similar instances we learn that one state of consciousness grows out of and into another state.

FEELING, KNOWING AND WILLING ARE INDISSOLUBLY CONNECTED.

The question will now suggest itself: Can we isolate these elementary states from one another? Can we obtain one case of pure feeling, another of pure knowing, a third of pure willing?

A child burns his fingers. This is apparently a state of simple feeling. Let us see if other elements are involved The child refers the "burning" to his *fingers*--not to his face or feet. Here there is discrimination, and discrimination is the distinguishing process of *Knowing* (p. 22). He pays attention to the burnt finger, and attention is a simple exercise of the power of *Will* (p. 33). Hence Knowing and Willing are involved in an apparently simple case of feeling. Similarly, if we examine a state of apparently pure intellect or pure volition, we shall find the other phases of mind present. Feeling, Knowing and Willing are "properties" of mind, which can neither be isolated from it, nor from one another, any more than the weight, shape and colour of this book can be isolated from one another, or from the book itself.

An attempt is made to illustrate this graphically in Fig. 10, where the three circles mutually overlap. If we view the mental state from the standpoint A we consider it a feeling, but there is some knowing and willing in it. If we view it from B we consider it intellect (*i.e.*, knowing), but feeling and willing are connected with it.

Since it is much easier to reason about one thing at the time than to reason about three things, we shall often speak of Feeling, Knowing and Willing as though they were distinct states of consciousness.

The constant use of the terms employed in classifying various phases of mental activity (*e.g.*, memory, attention, etc.) has led some to the erroneous view that the mind is an organism, consisting of component parts (memory, attention, etc.), just as the body is an organism consisting of head, trunk, limbs, etc.

Feeling, Knowing and Willing are opposed to one another.

Feeling is largely dependent on afferent nervous impulses, it is a state largely *passive;* Willing gives rise to efferent nervous impulses, it is a state mainly *active;* Knowing
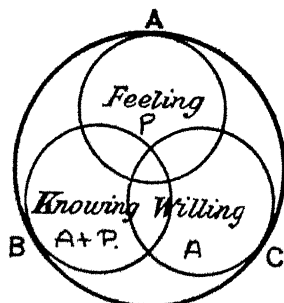
Fig. 10.

oscillates between these two extremes, it is both *passive* and *active.*

These three states are, as it were, constantly striving for the mastery. When we are angry, emotion has the upper hand; when we are studying psychology, intellect is predominant. All minds have one state developed more than the others. Thus we have the emotional man, the intellectual man, the strong-willed man. A man with a perfectly balanced mind has all three faculties developed in the same proportion. Such a mind can be represented by Fig. 10.

The normal child has his feelings fairly well developed, but is weak in knowing and in will. (Fig. 11.) The martinet

in discipline may be represented by Fig. 12. The book-worm is rarely an athlete. His state of mind may be represented by Fig. 13.

THE COMPLEXITY OF MENTAL OPERATIONS.

A characteristic difficulty of the study of mental science is the fact that we can never obtain a *pure* mental state for study. In even the simplest mental operation many mental states are involved. As we have seen, an apparently simple state of Feeling contains elements of Knowing and Willing. Knowing cannot be completely isolated from Feeling and Willing, nor can Willing be completely isolated from the other two phases of the mind. It is only by an act of abstraction that we can think of Feeling, Knowing and
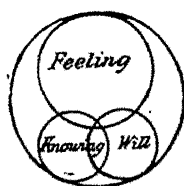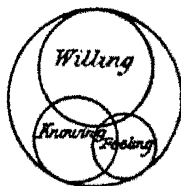
FIG. 11. FIG. 12. FIG. 13.

Willing as three *separate* phases of the mind, just as it is only by an act of abstraction that we can think of colour apart from coloured objects.

ATTENTION, DISCRIMINATION AND ASSIMILATION ARE NECESSARY FACTORS OF ALL MENTAL STATES.

When I say that a certain colour is *red* I *attend* to that colour, distinguish it (or *discriminate* it) from other colours, blue, yellow, etc., and I liken it (or *assimilate* it) to a certain colour which I have previously termed red. If everything in the world were of a uniform red I should have nothing with which to contrast and compare my impression "*red*," in fact I should have no impression "*red*" at all. If all external

impressions affected a being in one invariable way, that being would have no sensations and no knowledge. "The ability to discriminate or realise differences between two or more experiences is necessary for the mere possibility of knowledge; for an absolute similarity of mental effect from all impressions would mean an unknown and unknowable world." (Holman.) We become conscious of one mental state when we attend to it, discriminate it from other mental states and assimilate it to some previously recurring mental state. A mental state undiscriminated and unassimilated is an impossibility. Discrimination and assimilation imply reference to other mental states. All knowledge is dependent on other knowledge. There is no such thing as absolute knowledge.

GROWTH AND DEVELOPMENT.

We must carefully distinguish between growth and development.

Physical growth means mere increase in bulk or size; *physical development* implies structural changes. The egg does not grow, it *develops* into the chick.

Mental growth means an increase in the stock of mental materials; *mental development* means the elaboration of those materials into more complex forms. Sensation and perception favour mental growth; imagination, judgment and reasoning favour mental development.

Instruction is the feeding of minds to make them grow; it promotes mind *growth*. *Education* exercises minds to make them develop; it promotes mind *development*.

Some of the Causes of Differences in Development.

If two or three young children from one family are examined and contrasted with two or three young children from another family, it will soon be found that just as one family has certain characteristics of face and form not possessed by the other family, so the one family has certain mental

characteristics which are distinguishable from the mental characteristics of the other family. From this we infer that mental as well as bodily peculiarities are transmitted from parents to their children, *i.e.*, **heredity is an element in development.**

Suppose that thirty years hence we could examine two of these children of the same family. One has become a soldier, the other a student. The soldier is active, fearless and free; the student inactive, timid and retiring. But as children they were much alike. The difference then must be due to the lives they have led, to the scenes they have witnessed, to the people with whom they have been brought into contact; in other words, **environment is a powerful factor in development.**

We have pointed out some of the more important factors in development; we will now endeavour to classify all the factors in development.

FACTORS IN DEVELOPMENT.
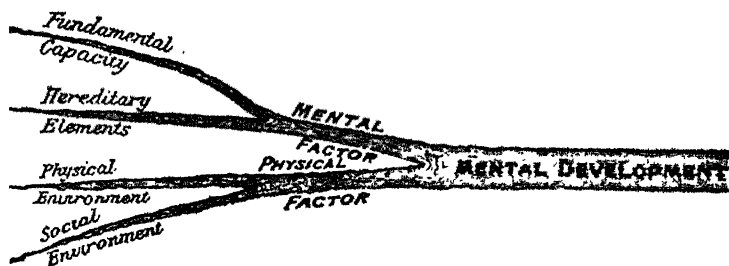
FIG. 14.

I. **Mental Factor.**

(*a*) *The Fundamental Capacity of the Mind.* **By this is meant original mental properties (such as the fundamental capabilities of feeling, knowing and willing) that are common to all minds.**

(*b*) *The Hereditary Elements*, which have not been acquired during the life of the individual, but have been handed down to him in connection with certain peculiarities

of his nervous structure. They are *tendencies* rather than elements and belong to the mind of the race rather than to the mind of the individual.

II. Physical Factor.

(*a*) *Physical Environment.* The body is the great physical factor determining development. The healthy body goes a long way towards making the healthy mind; the diseased body may produce the diseased mind.

(*b*) *Social Environment.* The home environment of many of the children attending our primary schools is not of the best. All parents do not recognise their duty to their children, and those who do are often unable to perform it. Much of the work of the primary teacher is directed towards neutralising the home influence. Of course this must be done by example, not by precept only. Where the home influence is for and not against the influence of the school, the teacher's work is considerably lightened.

STAGES OF DEVELOPMENT.

First Period.—Age one to seven years. During this period the child is the sport of circumstances, the slave of his environment. His mind is passive rather than active; his cognitions are mainly presentative, perception is remarkably active, thinking is but little used and mostly in the form of imagination. The feelings are egoistic, intense and of short duration. The will is at first practically lacking, but commences in time to assert itself, yet it is not till the end of the period that any continued voluntary attention evinces itself.

Second Period.—Age seven to fourteen. The mind becomes less and less passive and more and more active. It is no longer solely acted upon by its environment; it begins to *re-act* upon it. The materials gained by sense-perception are stored up in the memory, and, aided by the reasoning faculties, some attempt is made to elaborate them into new forms. The memory is remarkably active. What

is well learned during this time is rarely, if ever, forgotten. The childish imagination becomes restrained by wider experience. The judgment becomes more and more reliable, and towards the end of the period the higher reasoning powers are used with considerable effect. The feelings are brought more and more under control and become more complex. The will develops rapidly, sometimes too rapidly, causing an objectionable self-assertiveness.

Third Period.—Age fourteen to twenty-one. The mind now becomes subjective rather than objective, and busies itself with arranging and systematising the knowledge acquired in previous years. The purely verbal memory becomes weak, the aid of the judgment has to be invoked, and the judicious memory is the result. The feelings take a smaller and smaller share in mind economy and become more and more subservient to the intellect and the will. The man becomes less and less influenced by his environment, less and less dependent on circumstances. Development leads from dependence to independence; it is a march from slavery to freedom.

Order of the Consideration of Mental Operations.

We shall first deal with *Attention*, which is a *necessity* for mental operations. We shall then pass on to *Sensations* and *Sense-Perceptions*, which supply us with *materials* for mental operations. Since mind and body are so intimately connected in sensation, we shall make a brief study of those parts of the body (*the Sense Organs*) which are especially concerned in the reception of impressions which ultimately result in sensations and percepts. We shall next try to discover *how* the mind stores up the materials it gains through sense-perception. This leads us to the study of *Memory*. Next we shall see how, in the chapters termed *Imagination* and *Reasoning*, the mind works up its materials into new forms. Lastly we shall consider the *Feelings* and the *Will*, and their bearing upon *Habit* and *Character*.

Summary.

The Three Phases of Mind.

1. *Feeling.*— Pleasurable or painful conditions.
2. *Knowing.*—Discrimination of states of consciousness.
3. *Willing.*—Mental states leading to action.

These three phases of mind are connected with and yet opposed to one another.

A Characteristic Difficulty of psychology is the fact that we can never obtain a perfectly pure mental state for study. Every mental state involves elements of *Attention, Discrimination* and *Assimilation.*

Mental Growth implies increase in the stock of percepts, etc.

Mental Development implies the elaboration of percepts, etc., into higher forms.

Factors of Mental Development.	Mental Factor.	(*a*) Fundamental Capacity. (*b*) Hereditary Elements.
	Physical Factor.	(*a*) Physical Environment. (*b*) Social Environment.

QUESTIONS.

1.—Give an original example showing that feeling, knowing and willing are connected.

2.—What is the tripartite division ot mind? In which of the phases of mind would you place reasoning, attention, love, rivalry, resolution, memory? Give your reasons.

3.—Show that attention is an essential factor of all mental states.

4.—Bain's Law of Relativity is sometimes thus stated: Always to feel the same thing and not to feel at all amount to one and the same thing. Explain this.

5.—Clearly distinguish between growth and development

6.—Comment on the psychological soundness of the following: "The child is father to the man;' "As the twig is bent, so is the tree."

7.—Define clearly what you understand by environment. What place has school in the child's environment?

8.—Trace out in a general way the child's mental development during his school life

9.—Explain the term "development" as applied to a child's mind, and show how his mental development is re'ated to that of his brain Point out one or two of the more important bearings of the laws of development on education. (C P.)

10.—Define and give an illustration of the primary function of intellect. (L.U.)

CHAPTER III.

ATTENTION.

CONSCIOUSNESS AND ATTENTION.

The mind may be described as often in a state of "diffuse consciousness." We *see* things without *noticing* them, we *hear* sounds without *understanding* them, things *touch* us without our *feeling* them.

When we intensify consciousness by concentrating it upon an object, we are said to *attend* to that object.

(*a*) Suppose I am looking at a small object by artificial light. I cannot see it distinctly. I interpose a lens between my eye and the object. The light is concentrated on the object and I see it distinctly. *Now consciousness, like light, seems to increase in vividness in proportion as it is concentrated on one spot.* (Fig. 15.)
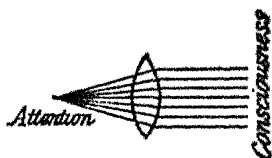
FIG. 15.

(*b*) Two boys are talking in an undertone in the class. The teacher is dimly conscious of a "noise" in the room; he thinks there is a noise, but is not certain. He begins to listen, to concentrate his mind, as it were, upon the supposed sound. He identifies it as a sound of conversation, and localises the sound as coming from the two boys who are talking. The boys are talking no louder at the conclusion than at the beginning of the incident, but the teacher has by his act of attention given greater distinctness and vividness to his consciousness.

DEFINITIONS OF ATTENTION.

(1) Attention is an intensified form of consciousness.

If we examine the derivation of the word attention, we find that it comes from two Latin words, *ad*, to, and *tendere*, to stretch. When we attend to a thing, we seem *to stretch out our minds to* that thing. Viewing attention in this light we arrive at another definition.

(2) Attention is the direction of the mind to any object which presents itself to it at the moment.

The term "object of attention" includes not only visible, tangible objects, but sounds, tastes, etc., and even ideas in the mind.

Attention can hardly be called a faculty of the mind. It is rather a *condition* of intellectual operations. *Clear* thoughts, *distinct* feelings, *deliberate* volitions are impossible without attention.

KINDS OF ATTENTION.

A boy drops his slate while I am engaged in writing on the blackboard. I hear a loud noise. I am startled and cease writing. I turn round and endeavour to find the cause of the noise. My being startled and having my attention diverted from my writing were due to no effort on my part. *I did it because I could not help it.* My attention here had nothing to do with my will—it was *Non-voluntary*. But I *could* help turning round, and I *could* help endeavouring to find the cause of the noise. My attention here depended on my will—it was *Voluntary*.

In the above-mentioned act of non-voluntary attention, the stimulus was *from without*. I was, as it were, at the mercy of the external stimulus. There was *no effort* on my part. In the act of voluntary attention, the stimulus (the desire to find the cause of the noise) arose *from within*, and I put forth *effort* in trying to find the cause of the noise. Hence there are two kinds of attention, *Voluntary and Non-voluntary Attention.*

I. Non-voluntary Attention is that condition (mainly passive) of the Mind in which it is acted upon by the mere force of the stimulus presented.

II. Voluntary Attention is that condition (mainly active) of the Mind in which it puts forth effort under the impulse of desire.

Non-voluntary attention is sometimes called Reflex Attention. It is more frequently styled Involuntary Attention but it would be better if this term were restricted to that attention given in spite of or in opposition to the will. Non-voluntary attention is best known as involuntary attention, and will be so styled in this chapter.

LAWS OF INVOLUNTARY (NON-VOLUNTARY OR REFLEX) ATTENTION.

We all know that an infant will look more readily at a bright light than at a feeble one, that when he is crying in the dark, a light brought into the room will sometimes (but unfortunately not always) cause him to stop, whereas the same light brought in during the day time will fail to secure his attention, that he will respond (by smiling, cooing, etc.) more readily to his mother's voice than to that of a stranger. Observations such as these enable us to define three well-marked laws of involuntary attention.

I. **Law of Quantity.**—Within certain limits, the attractive force of a stimulus will vary in direct proportion to the quantity of that stimulus.

Lights not too bright and sounds not too loud will arrest the baby's attention more readily than feeble lights and low sounds.

II. **Law of Change of Stimulus.**—Within certain limits, a change of stimulus (especially a change from a small to a greater stimulus) has a powerful effect in arousing the attention.

(*a*) The crying baby is sometimes quiet when a light is brought into the dark room largely on account of the change of stimulus.

(*b*) The teacher who generally speaks in a low tone of voice can, when occasion requires, raise his voice, thus increasing the stimulus, and consequently his chance of securing attention. The teacher who habitually speaks in a loud tone deprives himself of this valuable aid to discipline.

III. **Law of Quality.**—Within certain limits, the attractive force of a stimulus varies in proportion to its pleasurable or painful associations.

The mother's voice and face will arrest the fleeting attention when other voices and faces are of no avail, because with the mother's voice and face are associated pleasurable memories of the satisfaction of bodily wants, etc.

INTEREST is the name given to the pleasurable or painful feelings which are evoked by an object or idea, and which give that object or idea the power of arousing and holding the Attention.

Interest is the means by which the mind is drawn to any object and is a most important factor in the acquisition of knowledge. "Whatever does not interest the mind, that the mind is indifferent to, and whatever it is indifferent to is to that mind as if it had no existence."

To interest a child is not necessarily to *amuse* him, but to call forth some pleasurable (or painful) feeling which arouses the mind's activity, and activity, whether bodily or mental, is the child's delight.

THE CIRCUMSTANCES UPON WHICH INTEREST DEPENDS.

(*a*) Here are two series of signs:—

FATHER. ΠΑΤΗΡ.

When I look at the first I have a visual image (presentative image) which recalls memory images (re-presentative images) of a certain kind. These re-presentative images include dim outlines of the appearance of my father, etc., and with them are connected memory images of past experiences, mostly pleasurable, connected with my father. Hence the word has some *interest* to me. The process above described may be represented graphically thus:—
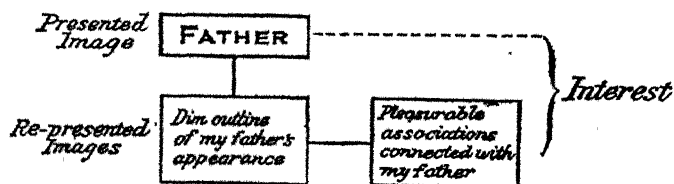
FIG. 16.

When I look at the right hand signs I have a presented image—nothing more. It calls up no associated mental image, it

has no meaning to me, it does not interest me. The word is however Greek for father, and to a Greek it would call up re-presented images presumably not very different from my own.

(b) One teacher wishing to teach that air presses upwards tells the class the fact and then proceeds to illustrate it. Another commences by filling a tumbler with water, putting a piece of cardboard on the top, and inverting the tumbler and card. The children will be filled with wonder that the water does not run out, will be curious to know *why* it does not do so, and will speedily become interested in the lesson.

The first teacher has stifled curiosity, and probably failed to arouse interest; the second teacher has created curiosity, and interest follows in its train.

From a consideration of these and other examples we are led to see the circumstances upon which interest depends.

I. **A certain amount of Similarity.** From (a) we see that the absolutely new does not gain our interest. There must be a certain amount of similarity between our present ideas and our past ideas in order that interest may be aroused. We are not interested in a present idea which is unlike any previous idea. There is no bond of similarity between the two, hence we fail to attend to that present idea. "A teacher must not expect a child to be interested in that of which he is wholly ignorant." Instruction must be graded so that a pupil may have a stock of ideas capable of revival which are somewhat akin to the new idea and which may give it interest. Hence the soundness of the dictum that "*Right methods produce interest.*"

A lesson showing that decimal fractions are really a part of our ordinary system of notation would be very interesting to a child of eleven who had a good idea of the notation of whole numbers and some knowledge of vulgar fractions. It would be very uninteresting to a child of six struggling with the difficulties of the notation of *thirteen* and *thirty*.

On the other hand, perfect familiarity is fatal to interest. We all grow tired of the oft-told tale. To give the amount

of repetition necessary for the formation of clear ideas and at the same time to maintain interest is one of the difficulties of the teacher's art.

II. **Degree of connection with what is pleasurable or painful.** The stronger the connection the better the chance of arousing attention.

III. **Curiosity.** Curiosity is the name given to that desire which the mind has of wishing to know the unknown. It is "one of nature's provisions for extending our range of knowledge." It is to the mind what appetite is to the body.

KINDS OF INTEREST.

I. **Natural Interest.** The value which the presentation has in itself.

II. **Acquired Interest.** The value which the presentation acquires in virtue of its association.

The attention which the young child gives to loud noises, bright colours, etc., arises from natural interest. The attention the biologist displays in dissecting an earthworm is maintained by acquired interest.

THE IMPORTANCE OF INTEREST IN INVOLUNTARY ATTENTION.

It is because of the great importance of interest in involuntary attention that this long digression has been made concerning it. Some have defined involuntary attention as that which is produced by interest, and voluntary attention as that which is produced by effort. Viewed in this light involuntary attention is a child of the *Feelings*, voluntary attention is a child of the *Will*.

FUNCTIONS OF THE WILL IN VOLUNTARY ATTENTION.

(*a*) I open a book in a language quite unfamiliar to me (say Chinese). I sit down, fix my eyes upon the characters and try my best to attend to the book. I put forth effort to attend. But just as the body gets tired of prolonged

bodily effort, so the mind gets tired of prolonged *mental* effort. The characters in the book do not recall other like mental images, and consequently no pleasurable or painful associations are revived. At last, tired in mind and body with my effort, I leave the book. I cannot attend to it, I do not understand it, it does not interest me. This example teaches that—

1. The Will can bring the mind and the object together, but it cannot force a connection between them when the link (Interest) is missing.

(*b*) A class is studying Gray's "Elegy." The teacher, during one lesson, can direct the children's attention to the general meaning of a part of the poem; during another he can direct attention to the correct reading of the same passage; on another occasion he can have the passage analysed and parsed. In the first case the interest centres round the meaning, in the second round the method of delivery, in the third round the technicalities of language.

(*c*) I go botanising one day and do not notice the *insects* at all. I play the entomologist another day and disregard the *flowers*. I go the same walk with a friend and indulge in a heated political argument, and flowers and insects are to me non-existent.

From these examples we learn—

2. The Will can determine the kind of interest which shall act at any given time.

(*d*) Young children in school cannot resist listening to the strains of a street organ.

(*e*) None but the well-trained scholar can omit looking up from his work when the gas is being lighted in the room.

(*f*) The most abstract of philosophers would have his train of thought interrupted by an exploding cracker beneath his chair.

Now examples (*d*), (*e*), (*f*) are instances of involuntary attention intruding into the domain of voluntary attention. Hence we learn that—

3. The Will is limited by the tendencies of Involuntary Attention.

The teacher who allows young children to look while the gas is being lighted is acting wisely in not fighting against a law

of Nature. Of course elder children might be reasonably expected to resist such a comparatively slight external stimulus.

CONTINUED VOLUNTARY ATTENTION AND INVOLUNTARY ATTENTION.

Interest was said to be a mark of involuntary attention; it is now seen to enter into an act of continued voluntary attention. We must now examine—

The ways in which they differ.

1. In voluntary attention the stimulus is internal; in involuntary attention it is external.

2. In voluntary attention the will can, by the exclusion of certain stimuli, select the stimulus which shall maintain it. In involuntary attention the stimulus acts independently of the will. In voluntary attention the mind is master of the stimuli, in involuntary attention the stimuli are masters of the mind.

3. Voluntary attention is lasting; involuntary attention is fleeting.

The Complex Character of Adult Attention.

We must recollect that, although we regard the acts of attention of the adult as mainly voluntary, yet both voluntary and involuntary elements are involved. "Even in the attention of the mature man there is always something of the involuntary and the enforced, the irresistible attraction of a favourite thought, of a study of predilection, of a dominant taste." (Compayré.)

Many muscular acts (*e.g.*, walking, speaking), which in early life are accomplished only by an effort of will, become in later life reflex. In the same way it would seem that acts of attention, which at first require will power for their inception, become in mature life habitual or automatic. It is difficult to define exactly the function of the will in them. What may be termed a habit of attention has been acquired.

DEGREES OF ATTENTION.

The attention of the teacher who is giving a lesson is different from that of a pupil who is receiving it. The pupil's attention is (or should be) concentrated upon the lesson. The teacher's attention is of a rather complex character. It is in a measure concentrated upon the subject-matter of the lesson, but, as he has been often through the same train of thought, the *whole* of his consciousness is not concentrated upon the lesson, but *part* of his consciousness is, as it were, diffused, ready to respond to any stimulus (talking, restlessness, etc.) that might arise.

An attempt is made in Figs. 17 and 18 to represent these differences graphically.
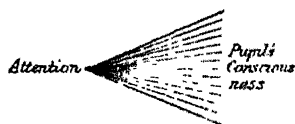
FIG. 17. FIG. 18.

The difficulty of keeping the consciousness at the same time concentrated and diffused is a trying one. Perhaps the reason some teachers cannot keep good order during a lesson is sometimes owing to the fact that they cannot keep their minds concentrated on the lesson, and at the same time maintain a state of diffuse consciousness ready for the perception of any irregularities that may occur.

The fact that in the mental world we can have, at the same time, a state of concentrated and diffuse consciousness may be compared to the fact that in the physical world we can have a well-defined image of that part of an object which falls upon the yellow spot, and a less well-defined image of the rest of the object, the image of which falls on the parts of the retina outside the yellow spot. (See p. 71.)

Some have gone so far as to say that we cannot attend to more than one thing at the same time, that in the foregoing instance what really happens is, that states of concentrated and diffuse attention alternate so quickly that we

imagine them to be two simultaneous acts of attention. As practical teachers we know how difficult it is to get a child to attend to even *one* thing. Whether it is psychologically possible for him to attend to more than one thing at the same time need not detain us. "One thing at a time" is a golden rule alike for teachers and taught.

Since we can have different degrees of attention, we will try to examine upon what these different degrees of attention depend.

Every teacher knows that—

(*a*) Children are more attentive in the morning than in the afternoon, at the commencement of a session than at its close.

(*b*) Weakly children are more prone to be inattentive than strong ones.

(*c*) Coloured pictures secure attention better than uncoloured ones.

(*d*) The ambitious child is more attentive than the unambitious one.

(*e*) Better attention is secured if the class be given some idea of the kind of special attention required. Children attend better to sights after being told to look for something and to sounds after being told to listen to something.

LAWS REGULATING DEGREES OF ATTENTION.

I. The intensity of an act of Attention depends on the amount of active energy disposable at the time.

Children attend better in the morning than in the afternoon, because energy has not been exhausted by the labour of the day. Weakly children are deficient in energy, and consequently prone to be inattentive.

II. The intensity of an act of Attention depends on the strength of the stimulus which arouses the Attention.

Coloured pictures are strong *external* stimuli. In an ambitious child the desire to be top of the class is a strong *internal* stimulus.

Other internal stimuli which may be evoked in children are:—

1. Desire to please teacher or parents.
2. Fear of punishment—(*a*) *Bodily*, "keeping in," chastisement; (*b*) *Mental*, disgrace of low marks, fear of ridicule or scolding.

The love of truth and right, the joy of discovery, the desire for influence and power are strong internal stimuli that appeal to children of larger growth.

III. **The intensity of an act of Attention depends on the pre-adjustment of the Attention to the stimulus of a particular kind.**

By pre-adjustment of the attention is meant the getting ready of the mind to receive an impression of a certain kind.

On hearing the word "Look," we adjust the attention for sights rather than for sounds, and the attention of the particular kind which results is all the better in consequence. When we are "all ears" we hear things that escape our attention at another time when we are "all eyes."

OBSTACLES TO ATTENTION.

I. Physical Obstacles.

(*a*) *Weakness of Bodily Powers.* This may be the result of heredity (the child may have "a bad constitution"), or the result of a prolonged course of poor food, the habitual breathing of vitiated air, etc. The worst cases are those in which the effects of constitutional weakness are accentuated by poor or deficient diet and air.

In these cases, the teacher is largely the victim of circumstances. Threats and punishments are of little avail. They give rise to timidity. Locke rightly says that it is as impossible to make lasting impressions upon a quaking mind as it is to trace firm characters upon a quivering sheet of paper. The only true course is to gain the child's involuntary attention through interest, and to work slowly and patiently towards the development of the higher powers of attention.

(*b*) *Unsuitable Physical Environment.*

1. *Noises in or near the class-room.* Children's attention is at the mercy of external stimuli. The teacher wishes the child's attention to be seized by *one* stimulus and that a *selected* one. If other stimuli are present, the attention will probably be seized by some *unselected* stimulus. The organisation of class and school should be such as to reduce

all distractions to a minimum. Loud talking in the room itself, a noisy teacher in the next room, an organ in the street are all so many external stimuli enticing the attention in the wrong direction. Quietude is the *sine quâ non* of the child's attention. The ideal plan is to place him in such an environment that nothing can excite distraction.

2. *A hot, badly-ventilated class-room* lowers the child's respiratory and circulatory powers in particular, and the whole of his vital forces in general. Lack of energy and consequent diminution of attention follow. The teacher who finds a general lassitude creeping over the class should look to the windows. Generally they will be found closed or an insufficient number may be open.

3. *Too long continuance of the body in one position.* Mobility is one of the characteristics of the child. It is impossible for him to keep still for a prolonged period. Compayré is very strong on this point, and says "the child has need of movement even when he is studying. . . . Let us not demand of him what is impossible at his age—that during the time he spends in school he shall be a *thinking statue*."

The inactive body soon produces the inactive mind. Many young children read much better if allowed to perform some favourite trick (such as rocking the body, standing first on one foot, then on the other) than when they are compelled to stand motionless. The teacher may mistake this restlessness for inattention. He can always determine whether the child is, or is not attending, by stopping the lesson and telling the child to rehearse in his own words that part dealt with during the period of supposed inattention.

But it must be remembered that it is unwise to yield too much to this mobility of the child. Orderly instruction would become impossible with children always "on the jig," and besides many uncomely habits and disagreeable tricks would be fostered. Still the wise teacher recognises the child's love of motion and makes some provision for it. Thus in a reading lesson he would have the children standing part of the lesson, sitting another part, and would freely intersperse individual with collective reading.

II. **Psychical Obstacles.**

1. *Those more immediately connected with the Pupil.*

(*a*) *Sluggishness of Temperament.* Every teacher has met with children who seem stolidly indifferent to school and to school work. Such children will, however, be found to be active in *some* respect. Thus a child who is "lazy" and "wooden" in school may be found keen and active in his play. Rarely, if ever, can a sane child be found who is not active in at least *one* direction. It is the teacher's business to discover the speciality of the child, and to work from that. A child whose interest centres in his play will be attentive in such lessons as drill and singing, which require the exercise of his activity. One department of knowledge is linked with another, and the child who is interested and consequently attentive in one becomes interested and attentive in another. Hence the necessity for a wide and varied curriculum in our schools in order that predilections of all kinds may be exercised.

It must not be forgotten that by the bond of sympathy an active, vivacious teacher is likely to make his pupils active and vivacious also.

(*b*) *Vivacity of Temperament.* This is one of the failings of the sharp, precocious child. Naturally intelligent, he finds that he is easily able to outstrip his class-fellows. Hence he is prone to minimise the value of sustained attention. The boy near the bottom of the class has to attend in order to learn, but *he* is so clever that he can learn without attending. Fortunately it is easy to deal with this case. The teacher should watch his opportunity and question this boy after some *new* matter has been presented to the class. In nine cases out of ten the searching questions of the teacher will expose the ignorance of this intellectual prig, his *amour propre* will be hurt by the exposure, and he will learn that strict attention is as much a necessity for him as for the rest of his class.

(*c*) *Condition of Mind at the time.* The condition of the mind at any given time is partly due to physical causes, such as environment, etc. (See p. 38.)

2. *Those more directly connected with the Teacher and the Lesson.*

We have seen that interest is the great means of securing the attention, and in order that interest may be aroused, there must be a certain, but not a perfect similarity between our present and past ideas. A child is sometimes inattentive because a lesson is "*too hard*," sometimes because it is "*too easy*." It is "too hard" where he has no ideas capable of recall which are sufficiently like present ideas to arouse interest. A lesson is "too easy" when it presents trains of ideas exactly, or mainly, like trains of ideas already existing in the mind.

Sympathy between teacher and taught is a great means of maintaining the attention. The sympathetic teacher may have to work in a badly lighted, badly warmed school, and his teaching may not be psychologically sound, yet notwithstanding these drawbacks, he will succeed in securing attention.

EDUCATIONAL VALUE OF VOLUNTARY AND INVOLUNTARY ATTENTION.

The schoolmaster of a generation back placed great stress on voluntary attention. Few or no efforts were made to render teaching interesting. Learning was looked upon as a thing of toil and effort. Effort was everything, interest nothing. But the will power implied in effort is just one of those things most lacking in children. Hence various "stimulants" had to be applied, and "reading without tears" was unknown.

The teacher of to-day relies mainly upon *Interest* for securing attention, because he finds—

1. That young children have little will power, and are consequently incapable of prolonged effort.

2. That young children have fairly developed powers of feeling, and that it is easier to excite their feelings (by interesting them) than it is to stir their wills (by trying to make them put forth effort).

3. That it is the *degree* of the attention, and not the *cause* of it, which determines the depth of an impression. The focussing of the attention is *the* thing, the cause of the focussing matters little. We recollect what touches our feelings at least as well as we recollect what we have worked hard to obtain.

Perhaps in our desertion of the old system we have embraced the new too thoroughly, and have overlooked the important fact that it is after all a *habit of attention* that we wish to cultivate, and that this can be acquired only through innumerable acts of voluntary attention. "Without doubt we must guard against the dangers of an education which is too compliant, too easy, which makes an abuse of what is diverting, and which excludes effort." (Compayré.)

DEVELOPMENT OF ATTENTION.

I. **Attention in Infancy is Involuntary.**—The infant is "the sport of every sight and sound." He cannot be said to have any attentive *power*. At one moment his mind is attracted by the bright fire, at another by a noise of some one moving in the room. At first fairly powerful stimuli are necessary; by exercise, less powerful stimuli become sufficient to attract the attention. The baby whose attention is now drawn to the bright fire, will, in a few weeks' time, be attracted by the lighted candle.

II. **Transition from Involuntary to Voluntary Attention.**—Professor Sully considers that the transition stage is found in the *continuance* of an act of involuntary attention. Thus the infant who looks an appreciable time at the fire is showing distinct volition in the prolongation of his involuntary attention. This kind of attention is strengthened by exercise. The gazes become of longer duration, and less powerful stimuli suffice to arrest and maintain them.

III. **Voluntary Attention.**—But more distinct evidences of voluntary attention soon show themselves. The baby who stops crying to listen for approaching footsteps is

performing a well-defined act of voluntary attention. The stopping and listening both imply *effort*, and effort is that which best distinguishes voluntary from involuntary attention.

Development of Attention in School.—The child is received into school with his powers of voluntary attention but feebly developed, as every teacher knows to his cost. The child's attention is distracted, flitting, momentary. A wise teacher will not require *sustained* attention in the young child. "He might as well command mobility of a bird." Threats and punishments which compel the outward semblance of attention are little good; firstly, because the child has not sufficient will power to bring his mind to the subject, and secondly, because even if mind and matter can be thus brought together, they cannot be kept together long unless interest intervene. The teacher is thus driven back to an appeal to the child's involuntary attention. He must habituate the child "to those vivid dominating impressions which hold and cultivate his mind." This can be best done by directing the attention, not to abstractions, but to *things*. Early acts of attention are spasmodic and of brief duration, *hence lessons to young children should be short.*

Variety is an important factor in the cultivation of the attention, but the teacher must be discreet as to its use. It is a bad plan in an object lesson to have a table crowded with attractive objects. Those objects not in immediate use should be kept out of sight. The aim should be to prolong the act of involuntary attention; the object should not be discarded until its most salient features have been observed and discussed by the class. The teacher must "beware of the peep-show order of excitement," in which so many things are seen that practically nothing is seen at all. Variety can, however, be usefully employed in the sequence of lessons. When attention of one kind (say to sights) is getting wearied, the attention of another kind (say to sounds) may be evoked and retained. The attention may flag at the end of an arithmetic lesson, yet the singing lesson which succeeds will arouse and maintain it.

It must not be forgotten that the teacher can make use of any or all of the following powerful stimuli for the evoking of attention:—

(*a*) Hope of teacher's approval—a powerful stimulus to the modest, retiring child.

(*b*) Emulation—powerful with ambitious children.

(*c*) Fear of punishment—mental or bodily.

Corporal punishment should be a last resource. Young children should never be punished for inattention. But some admit it to be efficacious in the case of the "sturdy vagabond," who is "born lazy." Here "I must" often becomes "I will," and regulated attention follows.

The mind becomes gradually strengthened by exercise, and will and voluntary attention grow with it. As the child's experience widens, he acquires a greater stock of re-presentative images, and any effort of voluntary attention is more likely to recall the appropriate re-presentative image, and interest sooner results. By dint of frequent repetitions of acts of voluntary attention, the child slowly acquires a facility in adjusting and controlling his attention, and a *habit of attention* at last results. Just as the child in early childhood begins to walk and talk with little or no conscious effort, so in later childhood he gradually acquires a habit of attention, and attends to things with a minimum of conscious effort.

Summary.

ATTENTION.

Definitions.—(1) Concentrated consciousness; (2) direction of mind towards object.

Kinds.	1. *Involuntary.*	2. *Voluntary.*
State of mind	Passive	Active.
Stimulus	External	Internal.
Characteristic	Interest	Effort.
Duration	Short	Prolonged.
Connection with primary phases of mind	Allied to Feeling	Allied to Will.

Involuntary Attention depends on:—

1. The quantity } of the stimuli.
2. The variety } of the stimuli.
3. The quality } of the stimuli.

Interest.—*Definition.* The feeling attached to an idea.

Dependent on :—

1. Similarity.
2. Connection with pleasure or pain.
3. Curiosity.

Function. To connect mind and matter.

Voluntary Attention depends on :—

1. Disposable active energy.
2. Strength of stimulus.
3. Pre-adjustment.

Obstacles to Attention.

I. *Physical* :—

(*a*) Internal. Bodily weakness.
(*b*) External. Unfavourable environment.

II. *Mental* :—

(*a*) Connected with pupil: temperament.
(*b*) Connected with lesson: unsuitability.

Development of Attention.

1. Early attention—involuntary.
2. Transition from involuntary to voluntary attention probably found in the *continuance* of an act of involuntary attention.
3. *In School* :—

Attention should be first directed to *Things*.
One thing should be presented at a time.
Lessons should be short and varied.
Emulation and hope of teacher's approval are powerful stimuli.
By repeated exercise, *habit of attention* at last acquired.

QUESTIONS.

1.—What is the difference between voluntary and involuntary attention? Give examples of both and of the conditions under which the powers of fixing and concentrating the attention of scholars may best be strengthened. (E.D.)

2.—How do you distinguish between voluntary and involuntary attention, and by what methods of training can the power of concentrating a pupil's attention best be strengthened? Adduce facts or illustrations which may have been suggested by your own experience in connection with this subject. (E.D.)

3.—What is meant by attention? How can it be cultivated in children? (E.D.)

4.—Explain and illustrate the statement, "Right methods produce interest." (E.D.)

5.—Give a psychological analysis of the terms attention and interest. Discuss (*a*) the conditions involved in voluntary control of attention; (*b*) the general nature of the circumstances that distract or obstruct attention. (L.U.)

6.—Give a short account of the several varieties of attention and compare their educational value. (L.U.)

7.—Why is involuntary attention especially valuable for intellectual ends? Suggest limitations to this. (E.D.)

8.—Explain fully what is meant by interest. In what relation does it stand to attention? (E.D.)

9.—Why do we fail to remember what does not interest us? (E.D.)

10.—What are the most common causes of inattention? State how you would deal with them. (C.P.)

11.—What is meant by the faculty of attention? How does it operate and how far is its exercise an act of the will? Mention some devices by which a teacher can strengthen in his pupils the habit of close attention. (E.D.)

12.—State and illustrate the main laws of attention and examine the following: "A teacher must not expect a child to be interested in that of which he is wholly ignorant." How does this bear on the method of teaching? (C.P.)

13.—What is interest? How is it related to attention and how are both related to retention? Point out any practical conclusions to be drawn from these psychological facts. (C.P.)

14.—Bring out the meaning of non-voluntary attention and obstructive association, giving a concrete illustration in each case. (C.P.)

15.—On what does a close and sustained attention depend? In what aspects does early attention differ from later? What differences in the mode of instruction are necessitated by these differences? (C.P.)

16.—Bring out the difference between non-voluntary and voluntary attention and show how the one passes into the other. How would you begin to exercise a child in voluntary attention? (C.P.)

17.—Explain fully why it is necessary in the case of young children, (1) to make the lessons short; (2) to introduce a variety of illustrations and of treatment generally. (C.P.)

18.—What appear to be the qualities which render an object more or less effective for attracting the attention of a child? (E.D.)

19.—What is meant by interest and what are its chief varieties? Bring out by means of an example the connection between interest in a subject, concentration of the mind upon it and curiosity to know more about it. (C.P.)

20.—Give a short account of non-voluntary attention. (C.P.)

21.—If you found the class you were teaching getting listless and sleepy, what causes might you suppose to be at work and what would be your remedies? (E.D.)

22.—Give a psychological account of the state of mind called interest, comparing the direct interest M N takes in h[illegible] with the reflected interest he takes in the paradigm Τ Υ Π Τ Ω from the rewards or punishments depending on it. Discuss the possibility of securing the former kind of interest in school work. (L.U.)

23.—What is meant by a "*habit of concentration*"? What is its educational importance and how can it best be secured? (C.P.)

24.—What are the main conditions of a prolonged act of attention? How does the power of mental concentration differ in the case of a child of five or six and that of a youth of sixteen? (C.P.)

25.—Enumerate such among the psychological facts concerning attention as you can show to yield rules for educational practice. (C.U.)

26.—Discuss carefully the effects of attention upon the presentations attended to. (V.U.)

27.—Distinguish reflex and voluntary attention, and analyse carefully an act of voluntary attention. (V.U.)

28.—What is the relation of attention to consciousness? Carefully define both terms. How would you deal with the question whether we can attend to more than one object at once? (V.U.)

29.—"Attention narrows the field of consciousness." Explain this, and illustrate the ways in which thinking depends upon attention. (V.U.)

30.—Define interest, and point out its relation to attention and to the intellectual processes. What different kinds of interest are there? Describe the early manifestations of each. (C.U.)

CHAPTER IV.

SENSATION; THE ORGANIC SENSES; TASTE AND SMELL.

EXAMPLE OF SENSATION.

While hard at work writing I smell something sweet, but am too busily engaged to tell where the sweet odour comes from. I am said to have *a sensation of smell*.

Minute particles from the sweetly-smelling substance reach the end organs of the nerves of smell (see p. 54) and set up vibrations there. These vibrations are continued along the afferent nerve to the brain. So far the action is purely physical. Now the psychical begins. The mind in some way (how we do not know) reacts on these vibrations, distinguishes them from other vibrations the brain has received, and connects them with those that have before given rise to smell.

DEFINITIONS OF SENSATION.

(1) **A Sensation is the "simplest psychical reaction against the nerve current caused by a physical stimulus."**

(2) **"A simple mental state resulting from the stimulation or excitation of the outer or peripheral extremity of an incarrying or sensitive nerve."** (Sully.)

In psychology we must carefully restrict the term sensation to the immediate mental effects of definite bodily changes. In ordinary conversation we use the term sensation otherwise. Thus we speak of the fire giving us the feeling or sensation of warmth. But the moment we begin to refer our mental state (warmth) to some object (the fire) we are *doing* something more than *having* a sensation.

We are referring the sensation to the fire, and are performing what is known as an act of *Perception*.

Examples Helping to Illustrate the Differences between Sensation and Perception.

(*a*) If, in the case given above of my smelling a fragrant odour, I by-and-by refer the odour to a rose on the table, I have a *percept of the smell of the rose.*

(*b*) I am asleep. Some one knocks at the door, but I do not hear the knocking. Yet the air vibrates, the ear vibrates, the afferent nerve vibrates. The chain of physical events is perfect, but the mind is not in a state to appreciate the physical phenomena, hence I do not hear. There is no "knocking" to me, although there is to some one who is awake in the room.

The repetition of the stimuli rouses the mind to an activity sufficient to commence to interpret them. *How* it does this we do not know. My mind differentiates these stimuli from visual, tactual and other stimuli, and *I become dimly conscious of a noise.* I may now be said to have a *sensation of "noise."*

This act of differentiation causes my mind to become still more active (I begin to get more awake), and I identify the noise as a "*knocking*," and refer the knocking, not to my brain, but *outwards to the door.*

Preliminary Definition of Perception.

Perception is the reference of sensation outwards to some object.

Perception Contrasted with Sensation.

Perception will be dealt with more fully in the next chapter. For the present we will notice that sensation is a *passive* state; perception is largely an *active* one. Sensation is a kind of *Feeling;* perception is knowledge-giving and allied to *Intellect.*

Sensations of Adult Life.

In adult life we pretty well invariably refer our sensations outwards, that is, we have percepts, not sensations. Again, when we have an apparently simple sensation (as in

smelling the sweet odour above), the sensation calls up "remembrances" of other sensations of a like kind. These remembrances coalesce with the present sensation, and form one apparently unanalysable whole. What then seems to be a simple sensation is in this case the mental results of physical stimulation mixed with memory. It would seem then that we cannot have a *pure* sensation.

A pure sensation is unobtainable, unanalysable. The chemist reasons about atoms, which he cannot obtain and which of course he cannot analyse. Sensations are to the psychologist what atoms are to the chemist. They are the ultimate facts upon which all else depend. We cannot reason about anything simpler than pure sensation. It is the simplest form of consciousness, the ultimate fact of mental life

CONDITIONS OF SENSATION.

I. **The Physical Factor,** involving:—

1. *The Mechanical Factor.*—Some form of vibration is the ultimate occasion of sensation. We shall appreciate the meaning of this better when we have studied the senses in fuller detail (p. 63).

2. *The Physiological Factor.*—This involves three factors:—

(*a*) *The end organ* receiving the mechanical stimulus.

(*b*) *The connecting nerve* conveying the stimulus from the end organ to the brain.

(*c*) *The changes in the brain tissue* itself.

II. **The Psychical Factor.**—The activity of the mind may be regarded as *the* factor in sensation. As we have seen (p. 48), the physical chain may be complete, but there is no sensation without the mind. *How* the mind receives the physical stimulus is quite unknown; *how* it interprets it is also unknown.

Comparison of Sensations.—Sensations may be compared as to:—

I. **Quality.**—This is an effect of the *kind* of stimulation. We do not confuse sights with sounds because they are different in quality or kind.

II. **Quantity.**—This is an effect of the *amount* of stimulation. The gas light is brighter than the candle because its stimulating power is greater.

III. **Locality.**—This is an effect of the *place* of stimulation. Every nerve fibre connected with sensation has one definite ending in the brain and another in some other organ. The mind infers that a change in a certain part of the brain must be caused by vibrations reaching it from some definite part of the body.

GENERAL AND SPECIAL SENSATIONS.—The examination of the end organs shows us that some are adapted to receive stimuli of a certain kind. Thus the structures connected with the afferent nerves of the eye are specially adapted to receive the stimulus ultimately resulting in "light"; they are not adapted to receive those stimuli which ultimately result in "sound." Other end organs have as their primary use the regulation of some organic function, as digestion. They have also a secondary use, insomuch as they give rise to sensations which tell us how the digestive functions are being discharged. But no part of the end organ seems to be especially adapted for this purpose. In other words, some sensations are connected with a sense organ, others are not.

"A Sense Organ is a part of the body especially adapted for receiving stimuli of a particular kind."

Those sensations connected with no special sense organ are termed **General or Organic Sensations**; those connected with special sense organs are termed **Special Sensations.**

THE GENERAL OR ORGANIC SENSATIONS.

The chief are :—

1. *Those connected with the Digestive System*, as hunger, repletion.
2. *Those connected with the Respiratory System*, as stifling, exhilaration.
3. *Those connected with the Muscles*, as "fitness," fatigue.

These sensations are termed *Organic* because they are connected with the organism as a whole; they are called *General* because they are localised with more or less difficulty.

Even if they are easily located at the beginning of the sensation, they have a tendency to diffuse all over the body. Thus the sensation of repletion, which arises from the stomach, gives rise to the beaming face, the contented mind and a general feeling of satisfaction "all over."

They cannot easily be discriminated from one another. Very important as regards our pleasures and pains, in fact at times all-absorbing, they give us no knowledge of the world without and little knowledge of that within. They are subjective, not objective. Extremely prominent in infant life, they become less important as life advances. They are the servants of the body rather than of the mind, yet they always exert some influence (often an imperious one) over the higher faculties of mind. The proper operation of the higher faculties of mind presupposes the satisfaction of the more pressing of the organic sensations. We cannot expect to impart instruction to the hungry child.
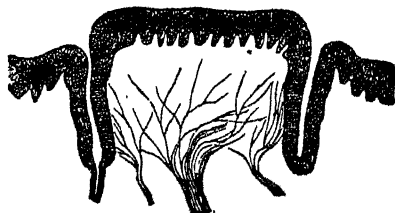
FIG. 19.—SECTION OF A CIRCUMVALLATE PAPILLA, SHOWING THE DISTRIBUTION OF ITS NERVE FIBRES.

THE SPECIAL SENSATIONS are connected with sight, hearing, touch (with the muscular sense), smell and taste. The first five are termed "the senses."

A *Sense* may be defined as the sum total of the sensations of a particular kind.

The Special Sensations easily fall into two classes.

1. *Those more immediately connected with the Organic Sensations*—taste and smell. These give sensations rather than sense-percepts.

2. *Those more immediately connected with the Intellect*—touch, the muscular sense, sight and hearing. These give sense-percepts rather than sensations.

TASTE.

Organ of Taste.—The sense of taste resides chiefly in the back part of the tongue and palate. The tongue owes its sensitiveness to taste to the fact that it has specially adapted structures termed papillæ. The most important are the circumvallate papillæ (Fig. 19) situated at the back of the tongue. Fig. 20 shows a section of part of a circumvallate papilla. The epithelium covering the papilla contains small flask-shaped bodies termed *Taste Buds* or
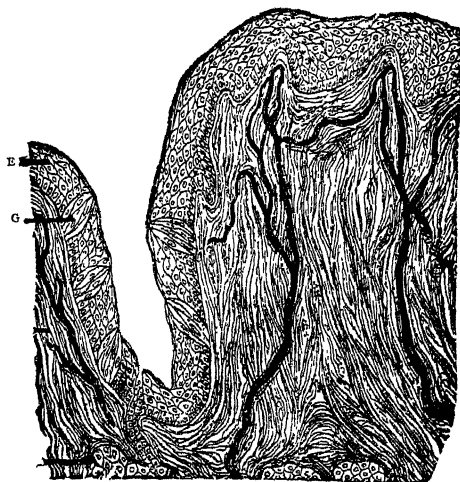
FIG. 20.—SECTION OF CIRCUMVALLATE PAPILLA (HUMAN)
The figure includes one side of the papilla and the adjoining part of the vallum. Magnified 150 diameters. (Heitzmann.) E, epithelium; G, taste bud.

Taste Bulbs. Each taste bulb contains a number of *Gustatory Cells* in which nerve filaments from the glossopharyngeal nerve terminate.

Sensation of Taste.—The particles of the substance to be tasted must come into actual contact with the gustatory cells before taste can result. But these cells are covered with epithelium—a thin coating of tissue which prevents the solid particles touching the gustatory cells. *Hence the sub-*

stance tasted must be soluble. The saliva is the usual solvent. The matter in solution penetrates the gustatory cells, stimulates the nerve endings, and this stimulation is conveyed to the brain, where it is interpreted as a special kind of taste.

Classification of Sensations of Taste.[1]

I. *Tastes Proper.*
  (*a*) Sweet tastes—sugars.
  (*b*) Bitter tastes—quinine, bitter-aloes.
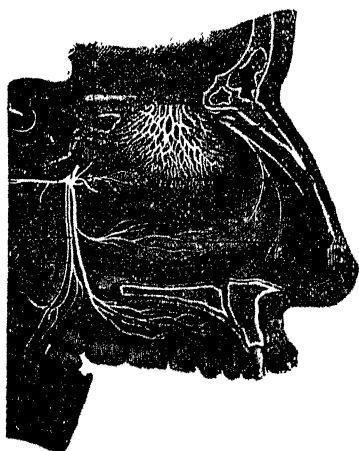
Fig. 21.—Nerves of the Outer Wall of Nasal Fossæ.
Network of the branches of the olfactory nerve.

II. *Tastes connected with the Stomach.*—Relishes and "disgusts." These vary with the condition of the stomach. "The feeling in the tongue indicates at once whether the substance will or will not agree with the stomach; the tongue is in fact the stomach begun."
  Butter is a relish to a man in good health: a "disgust" to one in the throes of sea sickness.

III. *Tastes connected with Touch.*—Pungent tastes—saline, alkaline; fiery tastes—salt, soda, mustard.

[1] These analyses of the sensations and percepts are based on those of Professor Bain.

IV. *Tastes connected with Smell.*—Flavours—the onion.
If the eyes are blindfolded and the nose tightly held, it is difficult to distinguish between the taste of an apple and an onion.

SMELL.

Organ of Smell.—The organ of smell is the nose. The complicated upper cavities formed by some of the nasal bones are covered with mucous membrane containing *Olfactory Cells* to which minute fibres of the *Olfactory Nerve* are distributed (Fig. 21).
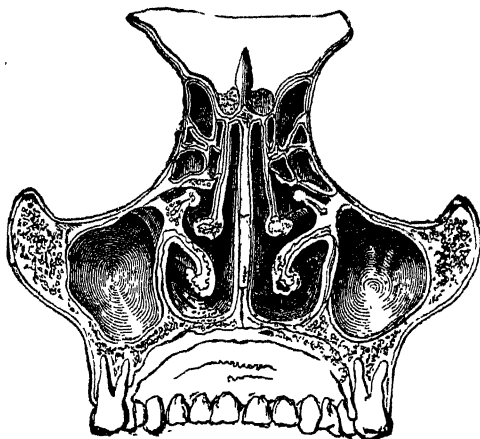
FIG. 22.—SECTION OF THE NASAL CAVITIES, SEEN FROM BEHIND.

Sensation of Smell.—Substances possessing odours give off exceedingly minute vibrating particles. In ordinary respiration the air passes through the lower chambers of the nose (Fig. 22), and the air in the upper chambers suffers little disturbance. Some of the tidal air, however, diffuses into the upper chambers, some of the minute vibrating particles penetrate these upper chambers, hence the first ill-defined sensations of smell. If we wish to smell well we sniff, *i.e.*, we withdraw air from the upper chambers, and

some of the tidal air laden with odoriferous particles takes its place. The particles touch the olfactory cells connected with the nerve endings and stimulate them. These stimulations are conveyed by the olfactory nerve to the brain, and sensations of smell result.

Classification of Sensations of Smell.

I. *Smells Proper.*—Fragrant odours and stinks—the violet, assafœtida.
II. *Smells connected with the Respiratory System.*—Fresh and close odours—open air after close room and *vice versâ.*
III. *Smells connected with Touch.*—Pungent odours—ammonia.
IV. *Smells connected with Taste.*—Flavours—onion.

Summary.

Sensation.	Perception.
The simplest psychical reaction against a physical stimulus.	The outward reference of sensation.
A simple passive state.	A complex active state.
Connected with feeling.	Connected with intellect.

Conditions of Sensation.

I. Physical Factor
- (*a*) Mechanical factor: vibration.
- (*b*) Physiological factor: end organ, connecting organ, changes in central organ.

II. Psychical Factor. Attention, discrimination, assimilation.

General Sensations.	Special Sensations.
No sense organ.	A sense organ
Difficult of localisation.	Easy of localisation.
Subjective.	Objective.
Give knowledge of pleasure and pain.	Give knowledge of external world.
The satisfaction of the most pressing is a necessity of organic existence.	Their exercise is a necessity of intellectual life.

The Special Senses more immediately connected with the Organic Sensations.

I. *Taste.* *Organ:* tongue and palate. *Nerve:* gustatory.
II. *Smell.* *Organ:* lining of upper nasal chambers. *Nerve:* olfactory.

QUESTIONS

1.—Define sensation, sense, sense organ.

2.—Give an original example to illustrate the differences between sensation and perception.

3.—What are the chief differences between general and special sensations

4.—In what ways do taste and smell resemble the organic sensations?

5.—Briefly detail the structure of the organs of taste and smell.

6.—Show in what respects taste is like smell.

7.—Why does sniffing assist the sense of smell?

8.—Why cannot we smell when we have a cold?

CHAPTER V.

PERCEPTION AND THE SENSES OF TOUCH, SIGHT AND HEARING.

Examples of Perception.—The process of perception will be better understood after the careful examination of the following examples:—

(*a*) *I see an orange.*

1. *I see.* Vibrations of ether are transmitted from the orange to the optic nerve of the eye, which conveys these vibrations to the brain. Now the mind begins to "interpret these vibrations, which are differentiated from other impressions (*e.g.*, from those coming through the auditory nerve, etc.), and are assimilated with those that have been recognised as *Sensations of Sight.* So far I have tried to explain that *I see.* (See the *Physical Factor*, p. 49.)

2. *I see something.* Now there would seem to be an instinctive tendency of the mind to project sensations outwards, to refer them to "things" outside the mind. This tendency is termed the "eccentricity of sensation."

> A boy who has his optic nerve stimulated by a method not unknown to English boys, says that he sees "*stars*," *i.e.*, he refers the sensation outwards to some object.

This primordial tendency helps to explain that *I see something.*

3. *I see something yellow and round.* The *rate* of vibrations of the ether waves produces certain impressions on the brain which the mind identifies as "yellow."

From the distribution of the image on the retina, I

recognise the shape under examination, and infer that *I see something yellow and round.*

4. *I see an orange.* My mind next begins to discriminate this perception of something yellow and round from the revived images of things yellow and round, *e.g.*, lemon, orange, melon, etc., and assimilates it to one of these previous images, and I thus arrive at the conclusion that *I see an orange.*

But with the idea orange are inseparably connected mental images of the taste, smell and feel of the orange, and I project these qualities into the orange.

That this is so, is seen from the following illustration:—

It is quite possible for an orange to be made of wax so skilfully that a child would desire to eat it. The child merely sees something yellow, round, etc., and this percept calls up to his mind the idea orange. With this idea orange are connected the taste, feel, etc., of the orange, and properties which the wax orange does not possess are projected into it.

(*b*) *I hear the church bell ring.*

1. *I hear.* The vibrations of the bell set up aerial vibrations, which are communicated by the ear to the auditory nerve and thence to the brain. These impressions are by the mind differentiated from other impressions, and recognised as auditory ones. So far I have tried to explain that *I hear.*

2. *I hear something.* By the eccentricity of sensation above referred to, I infer that I hear *something.*

3. *I hear a bell ring.* But I have had many auditory impressions (*e.g.*, noises, sounds of voices, of musical instruments, bells, etc.), and all of these are in a greater or less degree capable of recall. The presence of this particular auditory impression causes me to discriminate the particular sound I am hearing from memory images of other sounds, and I assimilate it to the memory image I have of the sound of a bell. This helps to explain *I hear a bell ring.*

But I have done something more than this. With the auditory memory image of the bell are inseparably connected the visual and tactual memory images of the bell. Ill-defined images are called up of something made of metal, cold to the touch, of the shape of an inverted cup, containing some kind of clapper which by striking the metal causes the sound I hear.

4. *I hear the church bell ring.* I have memory images of the sounds of various bells—dinner bells, church bells, electric bells, etc. The mind compares and contrasts the present impressions with the memory images of previously recurring states, and I come to the conclusion that it is a *church* bell that I hear.

But the recognition of the bell as a *church* bell calls up a shadowy image of a building set apart for worship and ornamented with a spire. So when I say I hear a church bell ring, I not only have sensations of sound of a certain

Fig. 23.

kind, but in a very dim way I have a mental picture of a bell hanging in a church spire and of this bell by its ringing giving rise to my present impressions.

The Process of Perception may be divided into two well-marked stages.

1. *The discrimination and identification of sense impressions.*—This is the *prehensive* part of the process.

2. *The conjunction of these present sense impressions with reproduced images of past sense impressions, and the projection of the whole group of present and past impressions*

into some external object.—This is perception proper, and is the *apprehensive* part of the process.

Perception does not tell us how the outer world really is, but how it appears to us. "The mind apprehends the outer world with the assistance of what it has already experienced, felt, learned and digested." Perception is something more than the mere consciousness of nerve excitation. If I look at Fig. 23 I have a percept-picture of a tree. If I look at it more carefully I see it is merely a grouping of a few lines. But these are sufficient to recall the idea "tree," and revived images of my past experiences of a tree are projected into this picture. I really put into it more than is already there.

DEFINITIONS OF PERCEPTION.

1. **"The process of localising sensations and referring them to definite objects."** (Sully.)

2. **"A complex mental act involving both presentative and representative processes."** (Sully.)

3. The work of the intellect in interpreting sense impressions.

4. Perception = sensation + thought.

A **Percept** is the result of an act of perception.

Frequently the term perception is used both for the process and for the result. It is best to confine the term perception to the process, and use the term percept for the result. Owing to the paucity of our vocabulary we are compelled to use the term sensation both for the process and also for the result.

COMPLEXITY OF PERCEPTION.—The complexity of the perceptual process is shown on resolving it into its various elements:—

1. Sensation.
2. Reproductive Imagination (memory).
3. Conception. The reproduced image is a concept (p. 150) which is the result of former sense impressions.
4. Reasoning, in assimilation and discrimination.
5. Belief in the reality of an external world.

DIFFERENCES BETWEEN SENSATION AND PERCEPTION.

Sensation.	Perception.
A simple mental state.	A complex mental state.
Presentative elements only.	Presentative and representative elements.
Difficult to recall.	Easy to recall.
A passive state.	An active state.
A simple form of *Feeling*.	A form of *Intellect*.
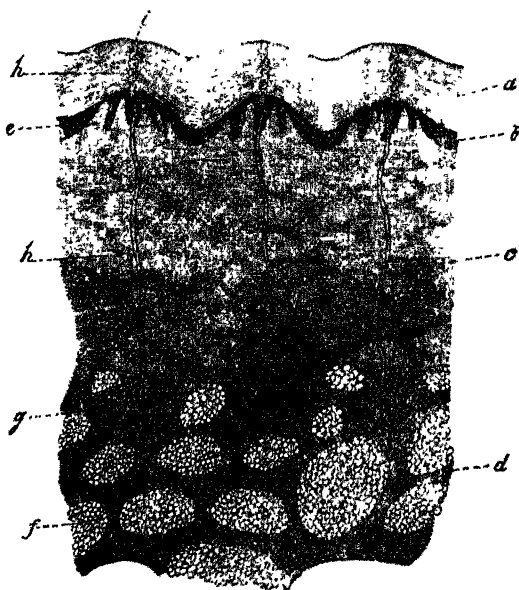
FIG. 24.—VERTICAL SECTION OF THE SKIN AND THE SUBCUTANEOUS TISSUE. MAGNIFIED 20 DIAMETERS.

a, horny layer of epidermis; *b*, Malpighian layer of epidermis; *c*, corium, *e*, papillæ *f* fat clusters; *g*, sweat glands, *h*, sweat ducts, *i*, pores

We now pass on to the consideration of those senses which may be regarded as the intellectual senses, and which yield percepts rather than sensations.

TOUCH.

Organ.—Almost all parts of the body are more or less sensitive to touch, but this sense is generally regarded as being located in certain parts of the skin and mucous membrane.

The Skin consists of two coats:—

1. The *Epidermis* or outer layer; mainly composed of flattened cells; contains a few nerve fibres but no blood vessels (Fig. 24).
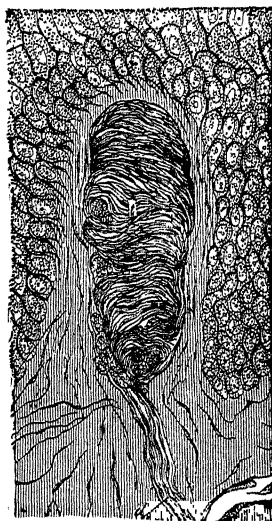
FIG. 25.—SECTION OF A PAPILLA OF THE SKIN, SHOWING A TOUCH CORPUSCLE. HIGHLY MAGNIFIED.
t, tactile or touch corpuscle, *d*, nerve fibres passing up to it.

2. The *Dermis* or inner layer; well supplied with nerves and blood vessels; raised into folds or ridges formed by **the Papillæ, which may be regarded as the real organs of Touch.** Thes. papillæ have on their surfaces *Touch Corpuscles*, which are the end organs of afferent nerves (Fig. 25). Although the papillæ may be regarded as the organs of touch, yet if the epidermis be removed, objects

which touch the dermis give rise to *Pain* and not to the sensation of touch.

Sensibility of the Skin.—By using bone compasses, and discovering the least distance apart the points can be placed to be felt *as two*, the varying sensibility of different parts of the skin may be estimated. The most sensitive part is the tip of the tongue, where the points can be discerned as two when $\frac{1}{24}$ of an inch apart. At the finger tips a distance of $\frac{1}{12}$ of an inch is necessary, whereas in the middle of the thigh the compass points must be 2½ inches apart before they are distinguished as two. Microscopic examination shows that the closeness of the papillæ varies in direct ratio to the degree of tactile sensibility.

SENSATION OF TOUCH.

The action of touch is one of pressure. The object touched compresses the *Skin* and through it the *Papillæ*. This pressure probably sets up vibrations in the *Touch Corpuscles*, and the *nerve filaments* at their bases convey these vibrations to the *Brain*, where they are received and interpreted as *Sensations of Touch*.

IMPORTANCE OF THE SENSE OF TOUCH.

1. The other senses may be considered as modifications and developments of it. Sapid substances must *touch* the tongue, odoriferous particles must *touch* the nose, air waves must *touch* the ear, ether waves must *touch* the eye, before tasting, smelling, hearing or seeing is possible.
2. The other senses depend upon it for assistance or confirmation. We prove or disprove our visual and auditory perceptions by tactual ones. We might see "ghosts," we might hear them; if we could *touch* them our scepticism in these apparitions would be considerably shaken.

The Sense of Touch and the Muscular Sense.—The sense of touch is popularly considered to include much more than scientific investigation warrants. The muscular sense, the sensations of heat, and those of cold admit of fairly easy distinction from the sense of touch proper.

Examples helping to show the difference between the Muscular Sense and the Sense of Touch.

(*a*) I swing a heavy weight in the air, and am conscious of a distinct sensation, not only in the part of the hand which grasps the weight (*Touch proper*), but also in the *muscles of the arm* (*Muscularity*).

(*b*) My hand is placed flat, palm upwards, on the table. A sheet of foolscap is placed on my hand. I have a sensation of touch. A quire of paper is now placed on my hand. I have a distinct feeling, not only of the extent of the paper (*Touch proper*), but also of something pressing down upon the muscles of my hand, and of the muscles of my hand resisting the pressure, *and endeavouring, as it were, to press back* (*Muscularity*).

(*c*) I look long and anxiously at a near object and have a sensation in my eyes of tiredness, not unlike that in my arm in case (*a*) (*Muscularity*).

THE MUSCULAR SENSATIONS are those which immediately accompany the action of the muscles.

Sense Organ. The muscles.

DIFFERENCES BETWEEN MUSCULAR SENSATIONS AND OTHER SENSATIONS.

The muscular sensations are combined with those of touch and sight, and it is not easy to separate them.

The examples (*a*), (*b*), (*c*) illustrate some of these differences. Another example may be added. There is a disease called *locomotor ataxia*, or failure of power of controlling certain muscles. A person may have this disease and yet maintain his purely tactile sensations unimpaired. The differences between the muscular sensations and the other sensations are set out below.

Muscular Sensations.	*Other Special Sensations.*
Connected with our *active* states.	Connected rather with our *passive* states.
Arise from the state of the muscles.	Arise from the existence of external objects.
Not detached from other senses, but enter into combination with them, especially with touch and sight.	Detached from one another.

CLASSIFICATION OF THE SENSATIONS AND PERCEPTS OF TOUCH.

I. **Passive Touch, or Touch Proper,** *i.e.*, the sensations received from the contact of objects with the epidermis.

Examples:—

Soft Touches, as clothing.

Smarts, as sting of nettle.

Plurality of Points, as feeling the bristles of a brush by simply placing the hand upon it and without moving the hand along it.

Pressure, as holding the hand, palm upwards, with a sheet of paper upon it. Here the sensation is probably due to the slight compression of the skin. Any but the slightest pressure calls into play the action of the muscles, and shades off into the next class.

II. **Active Touch, or Touch combined with Muscularity.**

Examples:—

Hardness and Softness. A hard thing is one that resists change of form, and we judge of the hardness by the amount of muscular effort we have to put forth in order to overcome it. Thus when a child says that an apple is harder than an orange, he infers this because he has to put forth more muscular effort in order to change the shape of the apple than the shape of the orange.

Roughness and Smoothness. We can in a certain measure discriminate between roughness and smoothness by means of touch proper (see *Plurality of Points* above), but the motion of the hand does much to increase the power of discrimination. Thus, I place my hand on a book cover and think that it is smooth; I move my hand along it and find it is slightly rough.

Weight and Pressure. When the hand is supported on the table, we probably judge of light weights by the degree of compression of the skin and by the resistance which the muscles of the hand offer to compression. Heavy weights are judged by the action of the muscular sense.

CLASSIFICATION OF MUSCULAR SENSATIONS AND PERCEPTS.

I. **Of Movement.**

(*a*) *In Connection with Touch.* The feeling on moving the arm forward is different from that experienced on moving it

backwards or sideways. We can discriminate one movement from another by the varying conditions of the muscles. Our first notions of space and distance are obtained through arm movement.

(*b*) *In Connection with Sight.* The eyes can be moved up and down, etc., and different feelings are experienced with each action. " Up " is what I raise my eyes to see. The mobility of the eye and the varying feelings of the muscles of the eye are important factors in the perception of space.
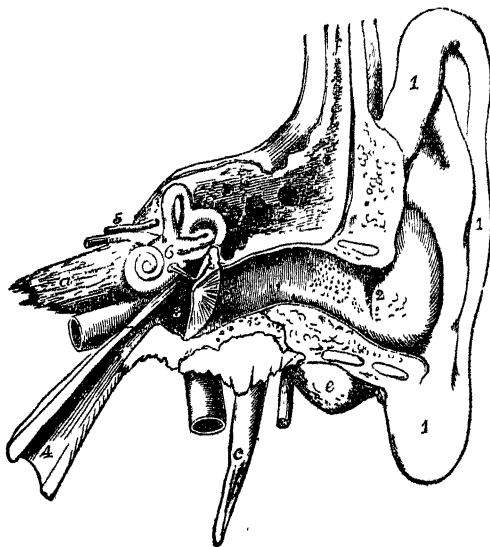
Fig. 26.—Diagrammatic Front View of the Left Ear.
A portion of the temporal bone has been detached.
1, the pinna and lobe; 2 to 2′, the auditory canal; 2′, the tympanic membrane, 3, the cavity of the middle ear—above 3 is the chain of small bones; 4, Eustachian tube; 5, the facial and auditory nerves, 6, placed on the vestibule of the labyrinth, above the fenestra ovalis; *a*, *c*, *e* and *f*, portions of the temporal bone.

II. Of Resistance and Strain.

(*a*) *In Connection with Touch.* I push against a load too heavy to move and experience a feeling of resistance in the muscles due to impeded muscular energy. I want to push my arm forward but cannot do it. The child gains his first ideas of solidity from the fact that resistance is offered to the muscles of the *two* hands and arms. I lift two

heavy weights. The one which produces the greater strain on the muscles of my arm I call the heavier of the two.

(*b*) *In Connection with Sight*. The varying strains produced in the eyes on looking at distant objects are, as we shall see, among the things that aid us in the perception of distance (p. 75).

HEARING.

Organ.—The ear, especially that part which is lodged in the temporal bone (Fig. 26).

The Ear consists of three parts :—

I. **The External Ear,** formed by the *Pinna* and the *Auditory Canal.* The pinna is adapted for the collection of sound waves, but is a comparatively unimportant part of the organ of hearing.
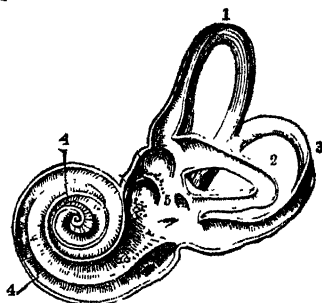
FIG. 27.—INTERIOR OF THE LEFT LABYRINTH.
1, 2 and 3, semicircular canals ; 4, cochlea ; 5, vestibule.

II. **The Middle Ear** or *Tympanum* is a drum-shaped cavity, bounded on the outer side by the *Tympanic Membrane* and on the inner by the *Fenestra Ovalis.* Stretching across the tympanum are the *Auditory Ossicles.*

The differences between ordinary and physiological nomenclature should be noticed. In ordinary language we call the pinna "the ear" and the tympanic membrane the "drum of the ear."

III. **The Internal Ear** is very complicated in structure. It may be said to consist of two parts :—

(*a*) *The Osseous Labyrinth.* An intricate cavity in the

temporal bone. Its chief parts are the *Semicircular Canals* and the *Cochlea* (Fig. 27).

(*b*) *The Membranous Labyrinth.* A complicated "bag" in the osseous labyrinth, nearly similar to it in shape but smaller in size.

The membranous labyrinth floats in a liquid called the *Perilymph*, and contains another liquid called the *Endolymph* in which are some minute crystals termed *Otoconia.*

Fibres of the Auditory Nerve are distributed along the inner surface of the membranous labyrinth. They end at the bases of little cells which are provided with the minute *Auditory Hairs* (Fig. 28).
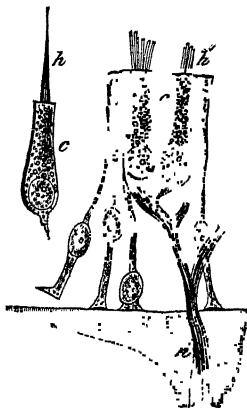
FIG. 28.—AUDITORY EPITHELIUM. HIGHLY MAGNIFIED.
c, cell; *n*, nerve fibril of auditory nerve; *h*, *h'*, auditory hairs.

SENSATION OF HEARING.

Take the case of a sounding bell. The bell vibrates and communicates its vibrations to the *air*. These aerial vibrations are collected by the *Pinna*, deflected into the *Auditory Canal*, and impinge upon the *Tympanic Membrane.* The three *Auditory Ossicles* transfer the vibration from the tympanic membrane to the *Fenestra Ovalis*, the vibration of which causes the *Perilymph*, *Endo-*

lymph, Otoliths and *Auditory Hairs* to vibrate in turn. The vibrations of the auditory hairs cause the *Cells* at their base to vibrate, and these again set up molecular disturbances in the *Auditory Nerve Fibrils*, which vibrations are conveyed to the *Brain*, where they cause changes in certain
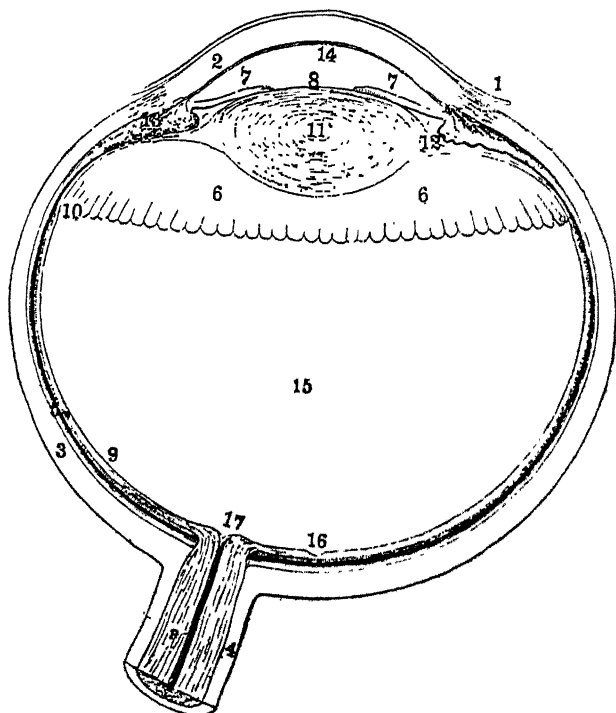
Fig. 29.—View of the Human Eye, divided horizontally through the middle.

1, conjunctiva; 2, cornea; 3, sclerotic; 4, sheath of the optic nerve; 5, choroid, 6, ciliary processes, 7, iris, 8, pupil; 9, retina; 10, anterior limit of the retina, 11, crystalline lens; 12, suspensory ligament; 13, ciliary muscle; 14, aqueous chamber, 15, vitreous chamber, 16, yellow spot, 17, blind spot.

parts of the brain tissue. The mind differentiates the vibrations and nervous changes, and interprets them as sensations of sound By further psychical action the sound is interpreted as that of a bell.

The semicircular canals are probably not auditory in their function at all, but in conjunction with touch and sight assist in balancing the body.

CLASSIFICATION OF THE SENSATIONS AND PERCEPTS OF HEARING.

I. **Those caused by regularly recurring vibrations.** Music.

II. **Those caused by irregularly recurring vibrations.** Noises. Many sounds, *e.g.*, those of common speech, are due to a mixture of regular and irregular combinations of vibrations.

SIGHT.

Organ.—The eye.

The Eye-ball (Fig. 29) **has three Coats**:—

1. *The Sclerotic:* external coat; white, strong and opaque; the "white" of the eye. In front the sclerotic becomes transparent, and is called the *Cornea.*
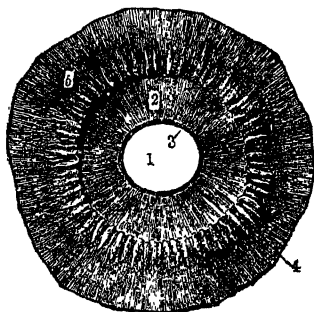
FIG. 30.—CILIARY PROCESSES AND RETINA AS SEEN FROM BEHIND. TWICE THE NATURAL SIZE.
1, pupil; 2, posterior surface of the iris, 3, circular muscle of the iris; 4, ciliary processes; 5, portion of the choroid

2. *The Choroid:* middle coat; black, delicate and thin. In front it becomes modified into the *Ciliary Processes* and the *Iris,* the circular hole in which is termed the *Pupil* (Fig. 30).

3. *The Retina:* inner coat; covers the back part only of the eye. The structure of the retina is very complicated. It may be regarded as the end organ in which terminate the fibres of the optic nerve. The *Rods* and *Cones* are the

most remarkable structures of the retina. They are distributed fairly uniformly except in two spots:—

(1) *The Yellow Spot* or point of most acute vision where *Rods only* are found.

(2) *The Blind Spot* or point of no vision where *neither Rods nor Cones* are found.

Transparent Media of the Eye.

1. *The Cornea:* already noticed.

2. *The Aqueous Humour:* a watery fluid between the cornea and the crystalline lens.

3. *The Crystalline Lens:* a double convex lens between the aqueous and the vitreous humour.

4. *The Vitreous Humour:* a semi-solid mass filling the large posterior chamber between the crystalline lens and the inner posterior surface of the eye-ball.
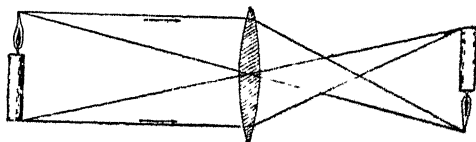
FIG. 31.

SENSATION OF SIGHT.

Vibrations of *ether* traverse the *Cornea*, *Aqueous Humour*, *Crystalline Lens*, *Vitreous Humour*, and impinge upon the *Retina*, whence the vibrations are communicated by the *Optic Nerve* to the *Brain*, where nerve-cell changes of a certain kind occur. The mind differentiates these molecular changes and identifies them as *Light*.

FORMATION OF AN IMAGE ON THE RETINA.

If we interpose a double convex lens between a lighted candle and a sheet of paper, we notice that when the paper is at a suitable distance from the lens we get an inverted image of the candle upon the paper (Fig. 31). The lens of a photographic camera acts in the same way (Fig. 32).

The crystalline lens acts as a double convex lens and throws upon the retina an inverted image of the thing looked at (Fig. 32).

FIG. 32.—THE MECHANICAL PARTS OF THE EYE COMPARED WITH THOSE OF A PHOTOGRAPHIC CAMERA.

If after we have obtained a clear image of the candle upon the paper we move the candle nearer the lens the image becomes less distinct. If now we substitute a thicker lens the image becomes clearer. The same lens will not give clear images of both near and distant objects.

ACCOMMODATION OF THE EYE.

The eye has to look at near and distant objects. We have seen that for a clear image of a near object a thicker lens is required than for a clear image of a distant object. It is obvious that the crystalline lens cannot be changed as the lenses were changed in the last experiment. The difficulty is surmounted by the crystalline lens *changing its thickness*. For near objects the crystalline lens becomes more convex in front, and consequently thicker from front to back. For distant objects it becomes less convex in front.

In a state of rest the front of the lens is kept somewhat flattened

by the suspensory ligament, which is attached to the crystalline lens and to the ciliary processes (Fig. 33) The ciliary processes are attached to the ciliary muscle, which is itself firmly attached to the point of junction of the cornea and sclerotic. When the ciliary muscle contracts the ciliary processes are pulled forward. This loosens the suspensory ligament, and the crystalline lens by its own elasticity becomes more convex. The strain felt in looking at an object very near to the eye is the muscular feeling due to the contraction of the ciliary muscle.
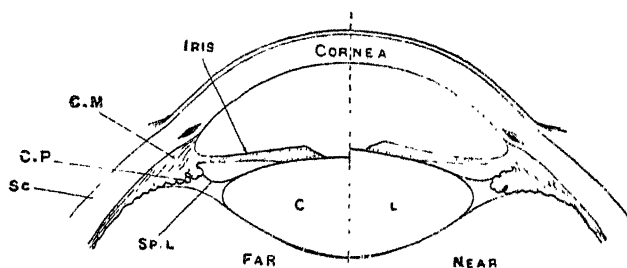
FIG. 33.—DIAGRAM TO ILLUSTRATE ACCOMMODATION.
Sc. sclerotic; C.P., ciliary processes; C M, ciliary muscle; Sp.L., suspensory ligament C.L., crystalline lens

THE MUSCLES OF THE EYE.

The eye is moved by six muscles. The position and names of the muscles are shown in Fig. 34. It is merely necessary to note that the amount and direction of the movement of the eye are inferred from the muscular sensations of one or more of these six muscles.

CLASSIFICATION OF SENSATIONS AND PERCEPTS OF SIGHT.

I. Sight Proper.

(*a*) Light, as distinguished from darkness.

(*b*) Colour.

II. Sight combined with Muscular Sensations.

(*a*) *Movement.* A very young child will follow a moving light with his eyes, thus showing the early (perhaps the

instinctive) tendency to connect sight proper and the muscular sensations.

Movements are interpreted as slow, quick, up, down, etc., according to the muscular sensations caused in one or more of the six muscles connected with the movement of the eye.
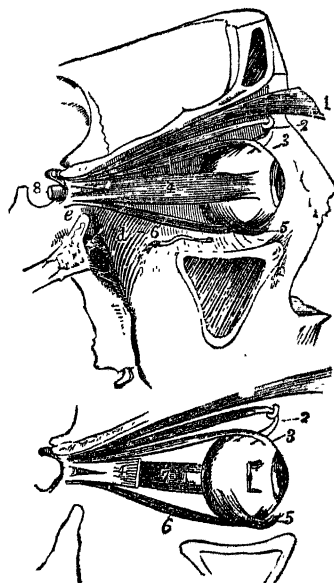
FIG. 34.—THE MUSCLES OF THE RIGHT ORBIT.
e, sphenoid bone; 1, muscle which raises the upper lid; 2, pulley and tendon of the superior oblique; 3, tendon of the superior rectus; 4, external rectus—partly removed in lower part of figure, 5, inferior oblique muscle; 6, inferior rectus; 7, internal rectus; 8, optic nerve

(*b*) *Distance.* Sight proper would seem to be powerless to estimate distance. Dr. Cheselden's patient, a boy about twelve years of age, who had been born blind, and whose sight was restored by a successful operation, at first "thought that all objects touched his eyes, as what he felt did his skin." The first perception of distance is undoubtedly obtained through arm movement. After numerous unsuccessful attempts, a conjunction is effected

between sight and the muscular sense, and the child learns exactly how much effort is required to touch an object which makes a certain impression on the retina. The ocular percepts become signs signifying the amount of muscular energy necessary. After constant repetitions the muscular movements are disregarded. Hence we imagine that we see distance, whereas we really infer it.

Ocular Signs connected with the Perception of Distance.

1. The comparative dimness or distinctness of outlines and colours on the retina.

2. The muscular sensations dependent on the accommodation of the eye. The "bursting" feeling and the subsequent tired feeling in the eye are due to the contraction of the ciliary muscles.

3. The varying degrees of convergence of the axes of the eyes.
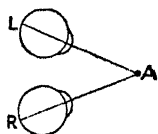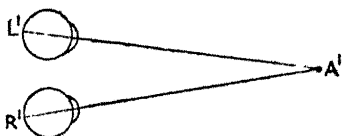
FIG. 35. FIG. 36.

The axes of the two eyes are always directed to the same point in the visual field. Thus in Fig. 35 they are directed to A, in Fig. 36 to A'.

In looking at a near object, A, the axes converge at A, making an angle, L A R (Fig. 35).

In looking at a more remote object, A', the axes converge at A , making an angle, L' A' R' (Fig. 36), which is more acute than the angle L A R.

The perception of very remote distances is really a question of inference. If we wish to estimate the distance of some object on the hill top, such as a tree, we note the apparent size of the tree, and from that infer the distance.

(*c*) *Form.*

1. *Plane Surfaces.*—Perception of difference of form is due to two causes :—

(1) *Differences of images on retina.* The crystalline lens throws on the retina a triangular image of a triangle, a rectangular image of a rectangle, etc.

(2) *Differences of muscular sensation.* The movement of the eye in following the shape of the Great Bear is different from that employed in following the shape of Charles' Wain.

2. *Solids.*—Although a solid body (if not too distant) projects two dissimilar images on the two retinas, yet observations on people born blind who have been restored to sight show that sight alone cannot give us perception of solidity. *A child gains his first ideas of solidity through the tactile and muscular senses.* The sunbeam offers no resistance to his grasp; the rails of his cot do offer resistance. He can thrust his hand into the water, but not into the soap of his morning bath. The use of the two hands is
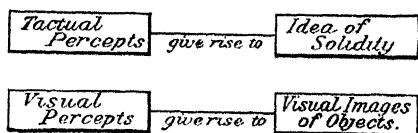
FIG. 37.

called into play for objects too large to be grasped single-handed. Crawling and walking round objects all tend to give an idea of solidity. All this time the sense of sight is being exercised in looking at objects, noting their forms, the light and shade on different parts, etc.

This state of things may be represented graphically in Fig. 37, where the two processes go on concurrently, but no connection is as yet established between them.

The visual percepts, after numberless coincidences, become connected with the tactual ones, and assist in giving the idea of solidity (Fig. 38).

The tactual percepts gradually become of less importance, while the visual percepts gradually become more important, and by-and-by are all sufficient for giving the idea of solidity (Fig. 39).

Hence the psychological soundness of Fröbel's doctrine that the perception of form is best gained through manual reproduction. A child who has made several clay cubes would never commit the error of supposing that a cube has only four sides.

PERCEPTION OF SELF.

I. Perception of the Bodily Self.

(*a*) *The importance of tactile percepts in the perception of self.* The child soon begins to discriminate objects from one another. The discrimination of self from other objects belongs to a later stage. The earliest definite notions of self are probably acquired through examination of the body by
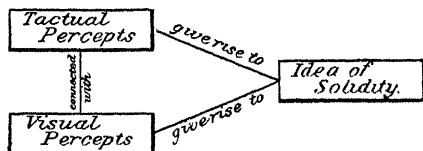
Fig. 38.
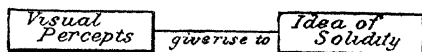
Fig. 39.

means of the sense of touch. The child on touching the side of his cot has *one* percept—that of active touch. When he touches a part of his own body he has *two* percepts—one of active touch localised in the hand, and another of passive touch localised in the part of the body experimented on. Thus in a rudimentary way he begins to divide objects into those that yield him *one* percept (not-self) and those that yield him *two* (self). The self-grasping, self-bitings, self-strikings of young children all tend to the same end—the differentiation of self from not-self.

(*b*) *Sight assists touch.* The child watches the motion of his arms, legs, etc., and probably connects the sight of movement with the feelings in the muscles due to motion.

(*c*) *The Trunk is first recognised as a part of Self.*

Although the limbs by their movements force themselves so much into notice, yet the trunk (on account of its intimate connection with the organic sensations—hunger, thirst, etc.) is probably the part of the anatomy first recognised as *Self*. The child now begins to call himself by the name by which he is usually addressed.

(*d*) *Next the Hands and Feet*. The hands are next recognised as a part of self, probably from the habit which all children have of sucking their fingers, and also from the fact that the hands so frequently pass over the field of vision. The incorporation of the feet as a part of self comes later. A child offers a biscuit to his *toes*, evidently regarding them as not-self.

(*e*) *Lastly the Head*. A child does not strike his trunk or limbs with his rattle, yet continues to strike his *head*, and desists only after many painful experiences. The reason for the late inclusion of the head as a part of self is doubtless due to the fact that the head cannot be seen. The *Mouth* is recognised as a part of self long before the rest of the head.

The incorporation of the first person pronouns into the vocabulary marks the final stage in the perception of the bodily self, and does not take place till the beginning of the third year.

II. Perception of Mental Self.

The *body* is to young children the chief part of self. The recognition of the *mind* as self belongs to a much later date. The child's attention is at first directed *outwards*. The development of certain egoistic impulses, as pride, rivalry, and a growing susceptibility to praise and blame, tend to direct the thoughts *inwards*. The final stage is reached when self is recognised as the subject of thought, feeling and will, and the body is referred to the not-self.

THE RELATIVE INTELLECTUAL IMPORTANCE OF THE SENSES.

The senses, as we have seen, easily fall into two classes:—

I. *Those more immediately connected with the Organic Sensations*—Taste and smell.

II. *Those more immediately connected with Intellectual Operations*—Touch (the muscular sense), hearing, sight. Taste and smell have been described as the "sentinels" of the alimentary and respiratory systems—the "servants of the *body* rather than the soul." Their function in life preservation is very great, but intellectually they are inferior to the other senses.

Taste and Smell are inferior to the other Senses in the following respects:—

1. *They are wanting in definiteness.* We are apt to confuse smell with taste, *e.g.*, flavours (p. 54).

2. *The discrimination of varieties is difficult.* We cannot distinguish two tastes or two odours that present themselves in rapid succession. After smelling carnations the rose seems odourless.

3. *They are very variable*, being sometimes efficient, and sometimes not.

4. *They do not give us much knowledge of the external world.* Only a small minority of things are capable of being tasted and smelled. How little would a child learn that could not see, hear or feel!

5. *They do not admit of easy recall.* We can more easily recall the sight image of the rose than the smell image of its fragrance.

The Relative Importance of Touch, Hearing and Sight.

Touch is by some regarded as the most important sense, because the others are apparently derived from it (p. 63) and certainly depend upon it for confirmation. During infancy, too, much of our knowledge is derived through touch.

In adult life hearing and seeing stand forth pre-eminently as the intellectual senses, and the eye must be awarded the palm as the intellectual sense organ. Our "memories" are chiefly visual ones. Our visual images are more numerous and admit of more easy recall than our auditory images.

Summary.

Perception. The process of localising sensations and referring them to definite objects.

A Percept is the result of an act of perception.

The Intellectual Senses are:—

1. Touch and the Muscular Sense.
2. Hearing.
3. Sight.

TOUCH. *Organ.—Touch Corpuscles*, in *Papillæ*, in *Dermis*, in *Skin*. Sensibility of skin is proportionate to frequency of papillæ.

The Muscular Sense. *Organ.—The Muscles.*

Classification of Sensations and Percepts of Touch.
- I. *Passive Touch.*—Touch proper. *Soft Touches, Smarts*, etc.
- II. *Active Touch.*—Touch combined with muscularity. *Hardness, Roughness, Weight*, etc.

Classification of Muscular Sensations and Percepts.
- I. *Of Movement*
  - (*a*) Connected with touch. } Help in the perception of short distances.
  - (*b*) ,, ,, sight. }
- II. *Of Strain and Resistance.*
  - (*a*) Connected with touch. Help in the perception of weight.
  - (*b*) ,, ,, sight. Help in the perception of distance.

HEARING.

Organ. The Ear.
1. External ear—Pinna, auditory canal.
2. Middle ear—or tympanum.
3. Inner ear—Osseous and membranous labyrinth.

Path of Aerial Waves.—Pinna, auditory canal, tympanic membrane, auditory ossicles, fenestra ovalis, perilymph, endolymph, otoliths, auditory hairs and cells, auditory nerve.

SIGHT.

Organ. The Eye.
- *Coats.*
  1. Sclerotic (and cornea).
  2. Choroid (and iris).
  3. Retina.
- *Lens.* Crystalline.
- *Humours.*
  1. Aqueous.
  2. Vitreous.

Path of Ether Waves.—Cornea, aqueous humour, crystalline lens, vitreous humour, retina, optic nerve.

Accommodation of the Eye.

1. The crystalline lens throws an image on the retina.
2. For the formation of clear images varying "convexities" of the crystalline lens are required.
3. The ciliary muscle helps to regulate the varying convexities of the lens—the front becomes more convex for near than for distant objects.

Classification of Visual Sensations and Percepts.		
	I. *Sight Proper.*	Light and colour.
	II. *Sight combined with Muscularity.*	(*a*) Movement.
		(*b*) Distance. (Distance is inferred, not seen.)
		(*c*) Form.

The Five Senses arranged in order of intellectual Importance.—(1) sight; (2) hearing; (3) touch; (4) smell; (5) taste.

QUESTIONS.

1.—Give a general account of the more important processes involved in perception or apprehension through the senses. (L.U.)

2.—Bring out fully the part taken by the sense of touch (active touch) in the development of our perceptions of form, and show the bearing of the principles on the right methods of early training in the perception of form. (C.P.)

3.—Illustrate the growth in a child of the idea of self. (E.D.)

4.—Analyse the process of perception with a view to show what constitutes bad or false perception, and how it may be remedied. (E.D.)

5.—[illegible] goes on when we perceive an object, and explain, as to a class of sixth standard children, the structure and working of the organs of sight. (E.D.)

6.—What is perception, and how is it distinguished from sensation? How does a child learn to recognise by the eye objects as the same at different distances? (C.P.)

7.—May the sensation of sight be produced without the use of the eye? If so, how?

8.—A person may be deaf although the ear is perfect in all its parts. Explain this.

9.—Why is it necessary to make use of the sense of touch in exercising children in the perception of objects? Illustrate what kind of help you would expect to get from appealing to this sense. (C.P.)

10.—Explain fully how a child learns (*a*) to localise his sensations in a definite part of his body; (*b*) to recognise by sight the solid or cubical form of an object. (C.P.)

11.—What is the importance of sense discrimination as a factor in the knowledge of things? Examine the following: "The retentive power works up to the height of the discriminative power, it can do no more." (C.P.)

12.—Give a brief account of the mental process by which we see and recognise some familiar object, say an umbrella among other umbrellas in a stand, bringing out more particularly the parts played by discrimination and assimilation. (C.P.)

13.—Compare the importance of touch and sight with taste and smell as sources of knowledge. (E.D.)

14.—It is said that the sense of touch is necessary to a clear perception of form in an object. Explain what is meant here, and show what use you would make of this sense in object teaching. (C.P.)

15.—Give a short account of the sensation of strain or resistance. (C.P.)

16.—Illustrate and explain by help of scientific principles the saying that "a child must learn to see objects." When and how should this learning be acquired? (C.P.)

17.—What is meant by education in sense perception? How are other mental activities affected when this has been neglected? (C.U.)

18.—Compare the different senses (*a*) as sources of knowledge, (*b*) as sources of feeling. (V.U.)

19.—What are the sensations frequently grouped as "the muscular sense"? Discuss their physiological basis. (V.U.)

20.—What conclusions can be drawn as to visual perceptions from cases of patients born blind and made to see? (V.U.)

21.—Discuss the importance of eye movements in developing the perception of space. (V.U.)

CHAPTER VI.

OBSERVATION.

1. General Definition.

"To observe is to look at a thing closely, to take careful note of its several parts or details." (Sully.)

Note the order of the definition. Proper observation implies the observation of the whole, before the observation of details. Looking closely at a thing implies attention, or a series of acts of attention, hence the following definition.

2. Observation in its relation to Attention.

Observation is "a series of connected acts of attention."

Percepts are among the objects of attention, hence the following.

3. Observation in its relation to Perception.

"Observation is regulated perception." (Sully.)

4. Observation in its relation to Attention and Perception.

Observation is "that prolonged perception which the attention directs towards a determined object." (Compayré.)

The second, third and fourth definitions are wider than the first. Observation in its widest sense implies not only a regulated attention to sights, but also to sounds, touches, smells and tastes, and even to ideas in the mind. Still, on account of the overwhelming importance of the form element, the remarks on observation will have reference mainly to *visual* observation.

5. Observation in its relation to Experiment.

Examples :—

(*a*) A teacher applics heat and converts water into steam.
(*b*) He takes a metal bar and shows that it gets longer on

being heated, and that the more it is heated the longer it gets.

(*c*) He can get his children to observe the clouds, and after lessons on evaporation and condensation, he leads his pupils to the theory of the formation of clouds.

(*d*) He gets them to examine the rocks in the locality, and after suitable illustrations and experiments, gets them to see that some were probably formed by the action of water, others by the action of heat.

All these would be exercises in observation, but a brief examination will reveal some important differences in these various acts of observation.

In (*a*) he takes a cause (*heat*) and produces an effect (*steam*).

In (*b*) he takes a cause (*heat*), and by varying the degrees of the cause (*applying more or less heat*) he produces different effects (*varying lengths of the bar*).

In (*c*) he observes an effect (*clouds*), and from this effect he works backwards to the causes (*evaporation, condensation, etc.*). He is certain of both cause and effect, but he cannot control either of them.

In (*d*) he can observe an effect (*stratification*), and from that he can infer the cause (*action of water*), but he cannot be certain as to whether his supposed cause has really produced this special effect.

In (*a*) and (*b*)

(1) He takes the cause, and *experiments* for its effects.

(2) He is an *active* observer.

(3) He *experiments*.

Experiment is that kind of experience in which we take causes and examine the effects which these causes produce.

In (*c*) and (*d*)

(1) He *observes* the effects, and infers the causes.

(2) His state rather approaches a *passive* one.

(3) He *observes*.

Observation is that kind of experience in which we are able to note cause and effect, but are unable to influence either; or it is that kind of experience in which we are able to note the effect only.

In experiment, man is master of circumstances; in observation, circumstances are master of the man.

Experiment is more potent as a knowledge-giving experience than observation. "We might have to wait years or centuries to meet accidentally with facts which we can readily produce at any moment in a laboratory." (Jevons.)

SCIENCES OF OBSERVATION AND SCIENCES OF EXPERIMENT.

Such sciences as meteorology, geology, mineralogy, botany, are sciences of observation. In them we deal mainly with effects; in some cases we do not even know the causes of the effects. Thus "male" and "female" are "effects" we meet with in botany and zoology; we know practically nothing of their causes. In some cases, as in meteorology, we know (or think we know) both cause and effect, but we cannot control either. It should be noted that within limits some of the sciences mentioned above are experimental. When the botanist watches the effect of light, electricity, soil, etc., on the growth of plants, he is conducting experiments rather than making observations. Such sciences as chemistry, magnetism, electricity, etc., are experimental sciences, because when we study them we can take causes and produce effects, and we can vary those causes and produce varying effects.

It is observation in its widest sense, and not observation as contrasted with experiment, that is dealt with in the following pages.

OBSERVATION IN CHILDREN.

1. **Observation in Infancy.**—What the infant six months or even a year old sees is a matter of great uncertainty. The eye has to learn to see, and it is not till babyhood is past and childhood begins that the perceptual powers and the attention are sufficiently developed to make observation possible.

2. **Observation in Childhood.**—With certain reservations given below, the recognition of form is one of the easiest ways of testing a child's power of observation, and it is interesting to note how much children really do observe. One method, but not an infallible one, of testing a child's powers of observation is by means of drawing from memory.

Fig. 40 is a drawing of a "man" by a boy barely three years of age. It consists of a rounded form (probably the head) and two legs.

Fig. 40. Fig. 41.

A class of Board School children, aged three and a half years, was asked to draw a clock, a man and a horse. Figs. 41, 42, 43 were the three best drawings—all the work

Fig. 43.

Fig. 42.

of the same embryo artist. The five hands to the clock (Fig. 41) are perhaps intended to represent the fact that the hands occupy varying positions.

The man (Fig. 42) is a brave effort. The upper segment represents the head with the two ears. The two dots are a recognition of the fact that there is *something* on the face. The second segment probably represents, not the neck, but that part of the trunk above the waist, which is forced into children's notice by the belts or sashes they often wear. It will be noted that the proportions of head, trunk and legs are fairly accurate. He entirely omits the arms—a common failing with the early draughtsman.

In some hundreds of childish drawings that have passed
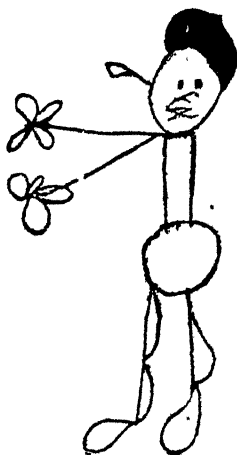
Fig. 44.

under the writers' notice, they have never seen one in which the *legs* were omitted and the *arms* put in.

After his previous efforts, his horse (Fig. 43) is decidedly disappointing. The *seven* legs show serious lack of powers of observation.

The arms seem a difficulty with children. They are put in all positions, springing from the neck, as in Fig. 44, from the head, and even from the legs.

In a class of thirty-five children, aged five years, asked to draw a man, six drew the face in profile, and of these six

four drew both eyes, and two of these four drew two noses, a full face and a side face nose (Fig. 45).

A class of thirty-eight girls, aged seven to eight, was asked to draw a man and a woman. No less that twenty-
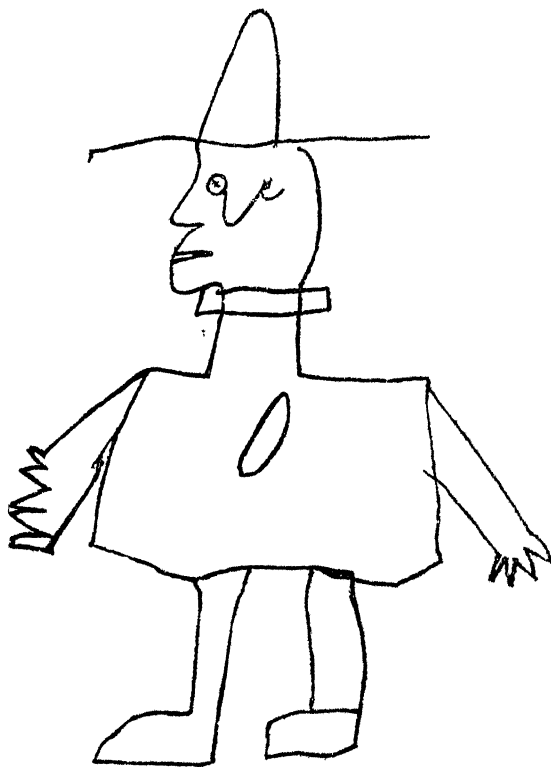
FIG. 45.

eight drew the woman without a skirt, and made practically no difference between the man and the woman (Figs. 46 and 47). Four who drew the skirt made the legs showing through it. Every child in a class of forty-one, told to draw a man on horseback, showed *both* legs of the man.

A further examination of children's drawings shows that not only is the average child's observation inaccurate, but that it is singularly capricious and one-sided. One illustration must suffice. In Fig. 48 the child, aged seven, who is hopelessly wrong in the position and proportion of the arms and hands, nevertheless depicts in minute detail the feathers in the hat and the buttons on the dress and boots. It is perhaps unnecessary to add that the artist was a girl.
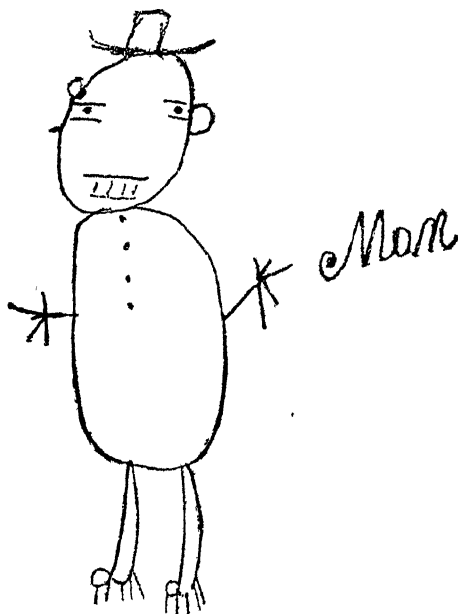
FIG. 46.

The defects of children's drawings are not entirely attributable to defective Observation.

Drawing from memory entails both the power to recall and the power to reproduce on paper the image recalled. The faculty of observation might be good, but memory and manual dexterity might be deficient.

Professor Sully regards many of the drawings of children *as pictorial definitions*. If this is so, then it is because the

child wishes to express the fact that a man has two eyes that he puts them in a profile face, and it is because he wishes to show that a man has two legs that he shows them both in a drawing of a man on horseback.

Yet when all these allowances have been made, it would still seem that the incorrectness of drawing is in a large measure due to defective observation.
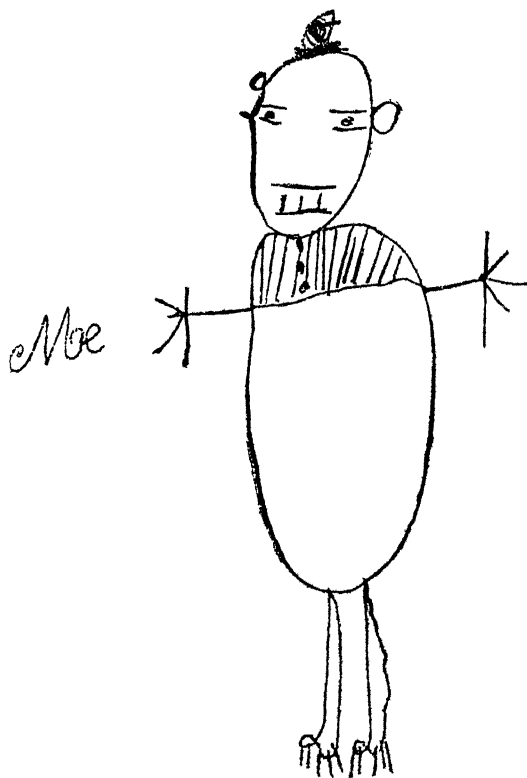
FIG. 47.

We are apt to overestimate the child's powers of Observation.

Mr. Stanley Hall in his interesting little book, *The Contents of Children's Minds*, says that those who have not carefully observed children give them credit for knowing more than

they really do know. He gives a number of interesting and convincing examples of deficient and incorrect observation and sums up his remarks as follows: "While no child has all these misconceptions, none are free from them, and thus the liabilities are great that in this chaos of half-assimilated impressions, half right, half wrong, some lost link may make utter nonsense or mere verbal cram of the most careful instruction." And again: "There is nothing of pedagogic value the knowledge of which it is safe to

FIG. 48.

assume at the outset of school life." Hence the educational necessity of object and kindergarten lessons as a preliminary to the beginning of more formal instruction.

Defective Observation is however not confined to children.

Many imperfectly educated persons will print Ƨ for S, and many well-educated people when asked to print V or W, put the thick strokes in the wrong position

" It is astonishing how much we all go about with our eyes open and see nothing. This is because the organ of vision like other organs requires training, and by lack of training and the slavish dependence on books becomes dull and slow and ultimately incapable of exercising its natural function. Let those studies be regarded as primary that ask young people to know what they are seeing and to see what they would otherwise fail to see " (John Stuart Blackie.)

Town and Country Children contrasted as regards powers of Observation.

The town child lives in the midst of whir and bustle. Many things are presented to his notice. His observation is distracted, opportunities of concentration are few, and the lack of concentration prevents proper development. The London boy is "like one of his own sparrows, in this street one moment, in that street the next; he has *plenty* of ideas, but no *distinct* ideas, he is quick, but wanting in depth, though his knowledge covers a wide surface." The country child leads a quieter life, fewer things come under his notice, and he gains a better acquaintance with those few things. The town teacher has to correct, regulate and control the observation of his pupils; the country teacher has rather to stimulate and extend the observation of the children committed to his care.

ANALYSIS OF OBSERVATION.

Three factors stand out prominently in any act of observation. They cannot be isolated, and are dependent one on the other.

1. **Perceptual Elements.** The accurate noting of what is presented to the eye.

2. **Elements of Attention** involving some command of the will and the awakening of interest.

3. **Correct Interpretation of the Perceptual Elements.** This depends largely on the previous store of images, whether they are, or are not, suitable for the elucidation of the present ideas. Correct interpretation is often hindered by prepossession of some idea. "To observe accurately is to put aside prepossession, to restrain the imagination, and to direct the mind with singleness of purpose to what is actually present to the senses."

TRAINING OF THE POWERS OF OBSERVATION.

Since perception and attention are factors in observation, it follows that the training of the powers of observation in

cludes the training of the powers of perception and attention (see pp 97 to 107 and pp. 38 to 44). The training of the observing faculty is the antithesis of book learning. The necessity of a special training in observation is becoming better understood. Many of us are the product of text-book learning, and find it difficult to embrace the new order of ideas.

Book learning, as distinguished from thing learning, has probably something to do with the preference shown by our young people for clerical as contrasted with manual labour, and for town as contrasted with country life. Cultivation of the powers of observation does much to inculcate a love of Nature, and to give a preference for country life.

The object of the teacher should be to get the children to observe a few things thoroughly. The facts gained from observation are really of secondary importance. It is the *power* to observe which is *the* thing; it is the *habit* of observation which is to be cultivated. This is better done "by the thorough examination of a few objects than by the superficial treatment of many." Many school subjects may be made the means of training the powers of observation; a few of these only can be considered.

Object Lessons.

Observations should be first directed to things *as wholes.* The special thing under observation should be compared and contrasted with other better known things. Thus the most striking and salient features of the subject of the lesson can be studied. Then some of the less important features may be noticed. Lastly, the results of all the acts of observation should be summed up and definitely connected with the object. The child should always be required to state the results of his observation in his own words.

It is a common mistake for the teacher to state the result of an act of observation, and then turn to the object to substantiate his statement. "The object is not allowed to speak for itself, eloquent though it is, and capable though

it is of adapting its teaching to the youngest child who questions it. The teacher buries it under a heap of words and second-hand statements, thereby converting the object lesson into a verbal lesson and throwing away golden opportunities of forming the scientific habit of mind." Such teachers teach "as though their pupils had eyes that saw not, and ears that heard not, and palates that tasted not, and skins that felt not, and muscles that would not work. They have insisted on taking the words out of Nature's mouth and speaking for her." (Canon Daniel.) Guide and in a measure control the observation of your pupils, put before them a set of facts, and get them to draw their own observations from those facts. Try to make your children discoverers rather than weary pilgrims along a beaten track. This is one of the refinements of the teacher's art to be attained only after long practice.

Many lessons are called object lessons in which pictures usurp the place of objects. A picture is at best an imperfect symbol of the thing, and appeals to one sense only. The thing, the whole thing, and little else but the thing should be a guiding principle in object lessons. The rough blackboard sketches drawn by the teacher are really the best pictures.

Elementary Science.

Lessons in elementary science when properly given afford unlimited means for the cultivation of observation. Text-books do much to prevent the development of the powers of observation, because they give the pupil second hand what he should acquire first hand. Too many teachers are addicted to allowing the class to read the book, and then bringing the specimen or the experiment forward to prove the facts stated. This, as we have seen (p. 32), stifles curiosity, fails to arouse full interest, and we can now add that it does not give a full training in observation.

The ideal plan is for the pupil to use at first only one text-book—the text-book of Nature, to train the pupil to

study that "book," and to record the results of his observations. The records should be entered in a note-book, verified by the teacher, and preserved for revision work. Of course as the pupil advances an ordinary text-book becomes necessary.

Geography.

The young learner of geography is too often set to learn "definitions" from a text-book. He recites his lesson correctly, and the teacher deludes himself into the belief that the scholar is learning some geography. But the child rarely realises that the things about which he reads are ever before his eyes, that the slope he walks up on his way to school has many points in common with the mountain, that the gutter after the April shower is typical of the river. The teacher should teach the beginnings of geography not from text-books nor even by word of mouth, but should get the children to observe (by means of school excursions and in other ways) the geographical features of the immediate neighbourhood. The environment of the school must be uninteresting indeed that does not furnish examples of most of the commoner geographical terms. When the district near the school has been thoroughly explored, wider excursions should be taken. Objects of industry and commerce may be next dealt with. The formal study of geography from text-books may then be commenced. Articles of trade should, as far as possible, be shown to the class; pictures, diagrams, models should be pressed into service. The "things afar" of the text-book should be illustrated by the "things near" within the observation of the pupils. Even such subjects as grammar and history may be made to cultivate the powers of observation.

Grammar.

The teacher should write on the blackboard a set of examples which especially illustrate the point he wishes to teach. He should get the children to *observe* these examples, and by careful questioning he should bring out

the "point" which is the subject of the lesson. He should then draw up a rule or definition based on the results of the observation of the class. Lastly, the definition should be applied to new cases.

Oral work should be taken as well as written work. Thus observation through the ear will be cultivated. Drawing up tables of conjugations, typical examples for word building, examples in sentence building, all furnish means of cultivating observation.

History.

The study of history should commence, not with the first Roman invasion, but with some object connected with history within the environment of the pupil. Our English coins, an election, the policeman, the town hall, the market cross, the village church, the neighbouring castle can be made materials for cultivating the powers of observation, and starting points for the study of history.

Writing and Drawing are two subjects which cultivate the powers of observation. In drawing it is especially necessary for the pupil to observe as a whole the thing which is to be drawn. Too often the drawings are faulty because the pupil has observed minutely some part of the object before gaining an accurate appreciation of the thing as a whole.

Summary.

Observation.—"To observe is to look at a thing closely, to take careful note of its several parts or details." (Sully.)

Observation in Children is singularly deficient and capricious.

Observation involves :—

1. Perceptual elements.
2. Elements of attention.
3. The correct interpretation of the perceptual elements.

The Training of the Powers of Observation is the antithesis of book learning.

Lessons especially valuable for the Training of the Powers of Observation.—Object lessons, science, geography and drawing lessons.

Even *Grammar and History Lessons* can be made to train the powers of observation.

QUESTIONS.

1.—What is meant by the faculty of observation? How would you endeavour to cultivate it (*a*) in a town school, (*b*) in a rural school? (E.D.)

2.—Distinguish between observation and experiment. What use does the teacher make of this distinction? (E.D.)

3.—Define sensation, perception and observation, and show how they are related one to the other. What can the teacher do to improve the observing faculties of his pupils? (L.U.)

4.—How would you cultivate the observing powers in the successive stages of education? (L.U.)

5.—What are the principal conditions necessary for rendering an object lesson in observation effective? (L.U.)

6.—"We cannot properly observe unless we can describe what we observe." (Mill.) Carefully consider the relation of observation to description in connection with intellectual operation. (L.U.)

7.—Describe carefully the value of pictorial illustration in class teaching. What dangers have to be guarded against in the use of pictures? (L.U.)

8.—Show how a habit of close observation of the distinctive characteristics of objects may be best cultivated in young children. (E.D.)

9.—What are the aims of the methods of the educator in exercising the powers of observation? Does the training of observation belong to one particular stage of education, or should it be continued throughout? (C.P.)

10.—Show how the grammar of the mother tongue may be taught as a science of observation. (C.P.)

11.—What physical sciences are best fitted to cultivate observation? Explain why it is that in teaching physical science these disciplinary advantages are often not secured. (C.P.)

12.—What do you understand by observation? Do you consider it necessary to train all children to observe? Give full reasons for your answer. (L.U.)

13.—What is meant by training the observing faculty of children? Is this a separate branch of intellectual education? Can it be reduced to a methodical form? (C.U.)

14.—How soon in a scholar's career would you begin to teach drawing, and when and in what circumstances should you cease to include it in a school course? Give your reasons. (C.U.)

CHAPTER VII.

THE DEVELOPMENT AND TRAINING OF THE SENSES.

CAUSES OF DIFFERENCES OF RATES OF DEVELOPMENT.

I. **Differences of Inherited Dispositions.**—The child from an artistic family is likely to show an earlier discrimination of colour and form, the child of savage tribes a greater appreciation of differences of sound, etc., than the ordinary child. Owing to past ancestral experiences, the child's temperament more readily responds to stimuli of one kind than another.

II. **Differences of Environment.**—A child's sensibility "grows by what it feeds on." The child from an artistic family could show no discrimination of colour if confined in a room, the walls and furniture of which were of one uniform tone. The savage child would develop no acuteness of hearing if kept in perfect silence.

ORDER OF DEVELOPMENT IS ON THE WHOLE UNIFORM.

But bearing these facts in mind, we find in the average child a fairly uniform manifestation of the order of sense development.

We must not imagine on glancing at the next few headings that the sense of touch springs into being before the sense of sight, etc. The normal child has in his earliest days all his senses, and can exercise them, although of course in a very rudimentary way. What is meant is that the sense of touch is developed in early childhood more rapidly than the sense of sight, etc.

ORDER OF SENSE DEVELOPMENT.

Leaving out of consideration the organic sensations, the most imperative of which are spontaneously active soon after birth, but which, on account of their low intellectual value, need not detain us, we can pass on to consider the order of the development of the more intellectual senses.

1. **Touch.**—Touch and the allied Muscular Sense are the first to be exhibited. The new-born babe shows evidence of distinct pain from pricking, pinching, etc. During the first few weeks of baby life the rate of the development of touch is far in excess of the rate of development of the other senses. The baby hand will clasp the mother's finger long before any notice is taken of the mother's voice or the mother's face.

2. **Sight.**—Evidence of sight is sometimes shown on the day of birth, but as a rule at first there is a distaste for light, and it is not till some time has elapsed that any eagerness for it is shown. The child at first merely discriminates light from darkness, next he learns to distinguish objects. The perception of solidity and distance arises from complex causes at a much later date (p. 75).

3. **Hearing.**—Loud noises startle many day-old children. At first the infant merely discriminates great noise from little or no noise. Later on he learns to distinguish his mother's voice. But this sense is comparatively slow in development, and does not progress much until the child begins to endeavour to imitate articulate speech.

4. **Taste.**—Some place Taste as the sense first developed. Certainly the baby vomits unsuitable food, but this rejection is perhaps due rather to general sensations connected with the digestive system (*e.g.*, nausea) than to the sense of taste proper. The child soon carries all things he can handle to his mouth, and thus gives himself exercise in this sense. Its development is, however, very slow.

5. **Smell** would seem to be developed last of all, and like taste its potentiality of development is small.

TRAINING OF THE SENSES.

By the Training of the Senses is meant the regular and systematic exercise of the organs of sense with a view to making the sense-percepts thereby acquired the efficient instruments of reasoning.

THE NECESSITY FOR SENSE-TRAINING.

The assertion that the senses do not require training is founded upon ignorance of the development of the higher intellectual powers. "Misled by erroneous notions of human dignity, older pedagogic methods have endeavoured to overleap the first stage of nature's culture, and to give a training of *con*ceptions before, and in place of, that of *per*ceptions."

The training of the senses is a necessary preliminary to the training of the higher powers of mind. Comenius said: "There is nothing in the mind that is not first in the senses." Accurate sense-perceptions are the best and indeed the only preliminaries to accurate reasoning. The mind can erect a substantial intellectual edifice upon a small basis of sensation, but there must be some sensory basis. The teacher who tries to train the powers of judgment and reasoning upon incomplete and inaccurate sense-perceptions is like the man who built his house upon the sand. The wise teacher endeavours to build up the intellectual edifice upon the *rock* of well-ordered and carefully trained sense-percepts.

CONSIDERATIONS AS TO THE TIME AND WAYS OF TRAINING THE SENSES IN SCHOOLS.

1. The Training of the Senses should be the first care of the Teacher of the Young.

The senses are first developed, then the reasoning powers. Therefore the senses should be the first to be trained. The infant sees, hears, feels; he does not show any desire to know the why and the wherefore of his sense-percepts.

The boy is at first contented to beat his toy drum, delighted with the noise he makes. The opening of the drum, to see

where the sound comes from, belongs to a later period, and marks a distinct stage in intellectual development.

The teacher receives the child with his senses somewhat developed, but they are often clumsy and inaccurate. It is the teacher's business to make them sufficiently accurate and delicate for the purposes of ordinary life and general intellectual culture.

2. **Contact with Objects is a prime necessity in Sense-Training.**

Too many teachers teach *words* and not *things*. They seem to think that "because words describing sensations can reach the mind, notions of the sensations must reach it also." Words may revive a past percept, they cannot teach a totally new one. A volume on the theory of music would give no idea of the diatonic scale to a man born deaf, nor can mere words give any idea of colour to a man born blind. Children should be allowed to see, touch, handle, and if necessary and convenient, taste and smell actual objects. It is in this way, and in this way only, that the senses can be effectively trained. Mother Nature does not *explain* what is meant by light and darkness, hard and soft, noise and quiet; she *presents* her varied phenomena, and through them the child acquires his ideas.

Language and Literature an apparent exception. In the case of language and literature it would seem at first sight that it is possible to teach words without things, and the marvellous power of verbal memory possessed by some children would seem to support this idea. But words are mere empty symbols if they do not represent ideas. Ideas are based on concepts, and we shall learn that concepts are built up from percepts. Hence, if words are to have their proper significance, the ideas which they represent must have been acquired ultimately through things.

3. **The Senses should be trained in the order of their development.** By this we do not mean that the teacher is to pay exclusive attention first to the training of touch, then to the training of sight. Psychology, for the sake of clearness, separates one faculty from another, but the ex-

clusive training of a single faculty is impossible. The training of the hand involves the training of the eye, and the use of the higher faculties of judgment and reasoning. What is meant is that the teacher of very young children should devote special (but not exclusive) attention to the senses of touch and sight rather than to those of taste and smell. The child naturally desires to touch and to handle what he sees. The teacher should not act upon the "look but not touch" principle, but should allow the child to use his *hands* as well as his eyes.

4. **As many of the Senses should be appealed to as possible.** Almost every object appeals to more than one sense. Bunyan says that the town of Man-soul has five gates—ear-gate, eye-gate, etc. Too many teachers approach one gate only.

In giving a lesson on copper, one teacher deals with the colour, and then passes on to some such topic as the method of obtaining the ore, thus appealing to one sense only—sight. Another teacher not only lets the child look at the copper, but lets him *feel* it, *bend* it, *put the tongue* to it, *strike* it, thus appealing to the senses of touch, muscularity, taste and hearing.

Other teachers "knock" at as many "gates" as possible. The child has not a complete percept of the thing "orange" unless he can recall its shape, colour, touch, smell and taste, and he can recall these ideas only after he has gained them through sense-perception.

5. **The Senses should be trained in proportion to their intellectual importance.** Sight and touch are *par excellence* the intellectual senses. The eye should be appealed to whenever possible. A child remembers what he sees much better than what he hears. The impressions gained through sight should be corrected by those gained through touch. A child, who, on being told to look at a brick and tell the number of its sides, answers that there are four, should be made to *handle* the brick and count the sides.

ACTIVITY IS A NECESSITY IN SENSE-TRAINING.

"Learn by doing" was Fröbel's maxim. The spontaneous activity of children is one of their most marked characteristics. The teacher should not repress this activity, but seek to divert it into the proper channels. A common mistake is to suppose that children must sit still and listen to the words of wisdom (or unwisdom) of the teacher, and afterwards reproduce the verbal signs of knowledge. Activity, not passivity, is the child's mental state. Children should always be kept doing *something*; "doing nothing" should not be tolerated. But the exercises given must not be pure mechanical repetition.

The teacher who after he has shown a triangle wishes to impress upon the class the fact that a triangle has three sides, and who lets his class repeat "a triangle has three sides," "a triangle has three sides," *ad nauseam*, is condemning his pupils to an intellectual treadmill. A better method of procedure would be somewhat as follows:—

1. Show pieces of cardboard of various sizes cut into triangles. Let children handle them.
2. Draw some triangles on the blackboard.
3. Show pictures of church spire, roof of house, etc.
4. Let children make triangles with pieces of wood, paper, etc., and let them draw some triangles on their slates.
5. Call attention to the fact that there is one thing common to all the shapes, namely, the presence of three sides.
6. Introduce the term triangle and draw up the definition.

In this way a number of repetitions would have been made, several senses would have been exercised, and yet interest would have been maintained. "Varying the instances" is a unique recipe for the maintenance of attention.

Exercise strengthens any faculty provided that exercise is neither too excessive nor too prolonged. Try to push off the weariness stage by making the work interesting, and one way to do this is to employ the activity of the children in as many ways as possible.

THE TEACHER MUST PLAY A SUBORDINATE PART IN SENSE-TRAINING.

It is his duty:—

1. To provide materials sufficient in number for ex-

tended observation, and sufficient in variety to evoke interest.

2. To simplify and graduate the exercises in sense-training. One step should lead to the next. There should be no leaps. We have to deal with the child, not with the adult. "The genuine trainer will think nothing too elementary or familiar, will smile at no depth of simplicity, and frown at no amount of awkwardness."

3. To guide and in a measure to control the observation of his pupils, and to turn the results of those observations into stimuli for further efforts. After that the teacher's part is one of "masterly inactivity;" the pupil must do the rest. "Nowhere perhaps is the limit of the teacher's power more plainly seen than in the education of the senses." (Sully.)

OBSERVATIONS ON THE TRAINING OF PARTICULAR SENSES.

SIGHT.

I. Training in Colour-Perception.

Colours, especially the primary ones, are very attractive to young children.

The exact order in which we acquire the perception of various colours is uncertain Professors Preyer and Höffding seem to think that *yellow* is first discriminated, while other authorities give preference to *blue* Probably the precise order varies with the individual.

Most teachers commence with the three primary colours, and then proceed to the secondary ones. There is no lack of variety in this exercise. Matching colours, threading coloured beads, crayon work, brush work may be called into requisition. Probably more attention is given to this subject in infant schools than its merits deserve. Our children will not all become artists. Still the subject gives abundant exercise in the discriminative faculty, and is always an interesting one to children.

II. Training in Form-Perception.

(1) *Kindergarten.* The kindergarten exercises give abundant facilities for the training of form-perception. Its

especial merit in this respect is its insistence on the connection of hand and eye.

(2) *Drawing.* This subject is taught too often on wrong principles. Children are wearied with countless repetitions of perpendicular, horizontal and slanting right lines. The child who spontaneously tries to draw always attempts the delineation of an *object*. The special delight of drawing is the satisfaction it affords to the imitative and creative instincts. The teacher should let the children satisfy this instinct by allowing them to draw actual objects. The blackboard, the door, a kite afford materials for such lessons. The use of rulers and squared paper will enable young children to get over the difficulty of making straight lines, and will allow them to devote attention to the proportion of the object. The first attempts will be crude, but continued practice will yield better results. Afterwards the lines of the object may be analysed and the whole drawn by freehand. The T-square, set-square, clock-face, hoop, bat and spade furnish more advanced exercises. At first only objects capable of representation in one plane should be attempted. What is ordinarily known as model drawing—a most useful exercise in form-perception—should be reserved for a later stage.

(3) *Writing.* The teaching of writing should *follow* the teaching of elementary drawing, since writing is really a study in the drawing of some fifty-two forms.

(4) *Reading.* The learning of the alphabet is a difficulty with young children, partly on account of the difficulty of form-perception. The lessons in drawing may be utilised. The children should be made to draw the forms on their slates. Those easiest of discrimination (as *i, o*) should be taught first; those requiring finer discrimination (as *b, p, q*) should be reserved for a later stage. Advantage must be taken of the "device of juxtaposition" in these exercises.

(5) *Object Lessons* are especially adapted for teaching form-perception. Children should be allowed to *handle* as well as to see the objects.

(6) *Geography*, by the employment of models, diagrams and maps, gives some exercise in form-perception.

III. **Training in Perception of Distance.**

Actual objects should be measured. The inch, foot and yard should not be mere verbal signs to the children, but tangible distances. Every classroom should have the foot, yard and metre painted on its walls, and the length, breadth and height of the schoolroom should be learnt by actual measurement. The dimensions of the playground may next be noted by actual measurement, the time taken to walk its length ascertained, and then the distances of the school from home and from public buildings in the vicinity may be inferred. This method rests upon the psychological basis that distance is not seen but inferred (p. 75).

TOUCH AND THE MUSCULAR SENSE.

Touch without the muscular sense is of little use as a knowledge-giving sense. In a normal adult touch ranks below sight in the perception of form. It is not so with children, who gain their first knowledge of form through touch. Children trust more to touch than to sight, and even in adult life touch is the final criterion of sight-perception. Fröbel was on sound lines when he insisted that the children must *handle* the kindergarten gifts.

TRAINING IN FORM-PERCEPTION THROUGH TOUCH.

1. *Drawing and Writing.*—The part the muscular sense plays in these exercises is apt to be overlooked. Yet we can all write our names, and indeed a whole line, with our eyes closed, in which case we are guided entirely by the muscular sense. The teacher who makes his pupils "draw" a curve in the air, before drawing it on paper, is giving a specific exercise to this sense. Many exercises should be given in form-perception through touch before writing is taught. Kindergarten rightly makes clay modelling, paper folding and elementary drawing antecedent to writing.

2. *Manual Training.*—Paper cutting, clay and cardboard modelling, needlework, cookery, laundry work, "wood work," Sloyd, metal work, all give abundant exercises in form-perception through touch and sight. There is some danger that in paper cutting and some other exercises the minuteness of detail makes what should be beneficial hand and eye training, hand training and eye *straining.*

3. *Object Lessons.*—The distinction of hard from soft bodies, rough from smooth bodies, and the estimation of the weight of bodies, give valuable training in the muscular sense.

HEARING.

1. **Training of Hearing in Reading.**—Monotonous reading is often caused by a lack of nice discrimination of auditory impressions. In the training of the discriminative faculty wide differences should be first presented, and, as the faculty improves, small differences will be distinguished. Hence the teacher should at first *exaggerate* the emphasis on words so as to bring the varied emphasis clearly before the children. As they become more expert a simpler and unaffected style may be gradually adopted.

2. **Training of Hearing in Singing.**—The education of the ear for music is slow. Noises startle the infant, but seem to please the growing child. "The more he is stunned, and the more he stuns others, the happier he seems." Singing, like speech, is a matter of imitation, and should be first learnt by the ear. The child speaks because he has heard others speak, he will sing from hearing others sing. After a time the notes of the diatonic scale should be introduced. Compayré is of opinion that in some schools too much importance is attached to singing by note, and that thus the only purely æsthetic subject in our schools is degraded into a mechanical routine.

SMELLING AND TASTING.

There is little opportunity of training these senses in school.

In the Object Lesson children should be allowed to smell and taste objects possessing distinct odour and taste, *e.g.*, camphor, alcohol, paraffin.

In Practical Chemistry considerable opportunity arises for the cultivation of the sense of smell, but instruction in this subject comes too late to have any great effect in sense-training *as a preliminary to higher mental training*.

DANGERS FROM AN ABUSE OF SENSE-TRAINING.

1. **Sense-Training may be over-specialised.** There is the ordinary sense-training, which endeavours to lay a foundation of accurate sense-percepts upon which the higher intellectual faculties may be raised, and there is the special sense-training of the painter and musician. The general training should not be carried so far as to become a means of special education. It is not our business to make our children embryo artists, or musicians, or mechanics, or chemists, but men and women of good perceptive power and sound judgment.
2. **Sense-Training may be too prolonged.** After a time sense-perception becomes automatic. Little attention and practically no judgment are necessary. A lesson in sense-training that might be a valuable exercise for a five-year-old child would be useless for a child three years his senior. "After some measure of training this kind of study is less a labour than a distraction."
3. **Sense-Training may be too exclusive.** "Too many of our authors talk as if there were a long period of the child's life in which he can do little but observe, when the perceptive powers employ the whole energy of the mind, and that consequently the sole duty of the teacher is to cram the mind with facts, making little or no effort, conscious or unconscious, to enable the child to see the universal which underlies the particular. This is certainly an erroneous and injurious view." (De Garmo.)
4. **Sense-Training has the possible defect of dealing too exclusively with individual notions, and not enough with general notions.** A child has some, though a limited, power to generalise. He can reason in a rudimentary way, and care must be taken to give *simple* exercises in the higher mental faculties as well as a good training in sense-perception. Sense-training lessons are not an *end* in education, they are but a *means* of rising higher.

Summary.

Development depends on :—

(1) Heredity. (2) Environment.

Order of Sense-development :—

1. Touch. 2. Sight. 3. Hearing. 4. Taste. 5. Smell.

Training of the Senses generally :—

1. Especially important with young children.
2. Contact with objects a prime necessity.
3. Training should proceed in the order of intellectual development, and should be proportional to it.
4. The activity of children must be appealed to.

Training of Special Senses :—

1. *Sight* may be trained in colour and form exercises and in the perception of distance.
2. *Touch* may be trained in drawing, writing, manual training and object lessons.
3. *Hearing* may be trained in reading and singing.

Dangers from an Abuse of Sense-Training :—

Sense-training may be over-specialised, may be too prolonged or may be too exclusive.

QUESTIONS.

1.—What do you understand by training the senses? State concisely the advantages secured by it, are any of these obtainable in other ways? (E.D.)

2.—How would you set about the training of the senses with a view to secure a wide range as well as minute accuracy of observation? (E.D.)

3.—What can be done in school to make hearing more sensitive and exact, or to improve the voice? (E.D)

4.—"Some of the senses are more precocious and others more tardy in their development, and besides, the senses are of unequal importance, and not rendering the same services do not deserve the same attention." Comment on this and illustrate your statement. Deduce practical considerations as to the times and ways of training the senses in school. (E.D.)

5.—Define precisely what you understand by training the senses of a child. Illustrate how you would seek to carry out such training. (C.P.)

6.—What is meant by the training of the senses? What are the proper place and value of this training in general education? Examine the assertion (*a*) that the senses do not need training; (*b*) that they can be overtrained. (C.P.)

7.—Take one of the three senses: sight, hearing, touch, and classify the sensations we receive by it; also show in what ways exercise improves the capacity of the sense, illustrating by a reference to elementary processes of instruction. (C.P.)

8.—It is said that the senses do not give us knowledge, but only the materials out of which knowledge is built up by the mind. Explain what is meant, and bring out by reference to an object lesson the bearing of this point on the proper method of object teaching. (C.P.)

9.—Explain psychologically the function of the senses in the growth of knowledge, and assign as accurately as you can the proper place of exercise and improvement of the senses in intellectual education (C.P.)

10.—How far does your knowledge of the sense of sight support the principle of Frobel that a nice perception of form is best gained in connection with the device of manual reproduction ? (E.D)

11.—What seems to you the specific excellences of sense-perception ? How far and in what ways may these be obtained through systematic training ? (L.U.)

12 —Bring out the meaning of the principle "Exercise strengthens faculty," and show its bearings on education Do all kinds of exercise develop the faculties ? (C P)

13 —Explain why a teacher should begin a course of instruction with an exercise of the senses. What senses is it most important to exercise in connection with the work of teaching ? (C P)

14 —What is meant by exercising the senses ? Discuss the question whether a high degree of sense-discrimination should be made a chief aim in education (C U.)

15 —Discuss the use of sense-training, and explain the methods of training the observation through sight and touch, singly or in co-ordination with each other. (V.U.)

CHAPTER VIII.

MEMORY.

Images and Percepts.

(*a*) I try to remember what an orange is like. At first "*something yellow*" comes into my mind. This "*something yellow*" acquires a rounded shape and a definite size. Then the markings on the orange are recalled, also its *feel*, *taste*, *smell*, etc. At last I have a mental idea of the thing orange before me. I am never likely to mistake this *idea* "orange" for the *real* "orange."

If I now try to think of an apple, the idea "orange" gradually fades away, and the idea "apple" gradually takes its place.

Provided I keep my attention firmly fixed, I can have the idea "orange" no matter whether I look upwards, downwards or sideways.

If I ask myself why I have the idea "orange" at all, I find that the idea "orange" is due to the recollection of an orange (or of many oranges) I have seen. When I *looked* at a real orange, a percept "orange" was presented to my mind; when I *think* of an orange, the revived percept (or idea "orange") is represented to my mind.

This idea "orange" is called:—

1. An image, or
2. A mental image, or
3. A representative image

} of an orange.

(*b*) Now we know that when we look at a real orange, we have a percept "orange." This percept is dependent on an external object—the orange. If the orange be re-

moved and an apple be substituted, the percept "apple" at once usurps the place of the percept "orange."

As long as I continue to look at the orange I cannot help having a percept "orange." If I close my eyes, the percept "orange" disappears. Hence it would seem that percepts are dependent on the will. But all percepts are not dependent on the will. No effort of will can prevent my having a percept "flash of lightning," or a percept "report of cannon." However, we conclude that percepts are often independent of the will.

DIFFERENCES BETWEEN PERCEPTS AND IMAGES.

A re-examination of cases (*a*) and (*b*) will help us considerably.

Percepts.	Images.
1. Vivid—make us think they are caused by something real.	1. Not so vivid—do not make us think they are caused by something real.
2. Dependent on external objects.	2. Independent of external objects.
3. Largely independent of the will.	3. Largely dependent on the will.
4. Appear and disappear rapidly in consciousness.	4. Gradually rise and subside in consciousness.
5. Largely presentative.	5. Entirely re-presentative.

It will be noticed that the word *Idea* is not used in (*b*). The term idea should be restricted to re-presentations. It is a larger term than image, embracing both images and concepts.

No sane person in a state of complete consciousness ever confuses images with percepts. The madman who sees all sorts of horrors does confuse images with percepts. In our waking life images are constantly being compared with percepts which exercise a corrective influence over them. In dreams we do not have this corrective influence, and images become so vivid that they are mistaken for percepts.

DEFINITIONS OF AN IMAGE.

(1) **An Image is the name given to a revived percept or a revived group of percepts.**

(2) An image is a re-presentative element in consciousness.

(3) "The form in which the percept appears after the removal of the object is known as a mental image or re-presentative image." (Sully.)

EXAMPLES SHOWING THE CONNECTION BETWEEN IMAGES AND PERCEPTS.

(*a*) The hand "tingles" some time after a cricket ball has been caught. If a tightly stretched string be struck it may be seen to vibrate some time after the blow. In the same way the tissues in the hand vibrate some time after the catching of the ball. This continuance of vibration causes the "tingling."

(*b*) The Catherine wheel displays a complete circle of fire although it is burning at one point only.

When light impinges on the retina the retinal nervous structures continue to vibrate after the removal of the light. The Catherine wheel moves round so rapidly that stimulation from the lighted point reaches the given point A (Fig. 49)
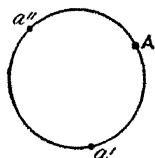
FIG. 49.

on the retina before the effects of the original stimulus at A have died down. This is true of every point, *a'*, *a''*, etc., on the path described, hence a circle of fire is seen.

A "something," largely physical in its cause, remains for a short time after the removal of the stimulus. It cannot be called an image, it is not re-presentative; it is rather a continuance of a presentation. It is allied to a percept, is the continuance of a percept, and is termed an **After-Percept.** An after-percept is like a percept because it is dependent on a physical cause; it is like an image because it persists after the removal of the physical cause.

(*c*) The air of some popular song will keep "ringing" in our ears some hours after we have heard it. Yet if we endeavour to recall this air at a later period we may be unable to do so.

This "ringing" in the ears lasted too long to be considered due to the continuance of physical vibration. It cannot be an after-percept. From the fact that it continues to revert to consciousness it resembles a re-presented image. Yet it is not a re-presented image insomuch as it requires no effort for its reproduction. We say that it keeps "cropping up;" we do not say that we recollect it. It is an "echo" of a percept, and is called a **Temporary Mental Image.**

Hence we can trace a series of interesting

Links between Percepts and Images.

Physical
1. **Percept**—due to external stimulus.
2. **After-Percept**—due to continuance of bodily changes after removal of stimulus.

Psychical
3. **Temporary Mental Image**—recurring without effort.
4. **Re-presentative Image**—called up with more or less effort.

WHAT HAPPENS TO PERCEPTS BEFORE THEY BECOME RE-PRESENTATIVE IMAGES.

We must not suppose that all percepts become after-percepts, etc., before they become re-presentative images. Some do; many do not. Let us try to see what generally happens.

(*a*) A boy sees the bright light resulting from the putting of a glowing splint into a jar of oxygen (*Percept*). He is "dazed" for a short time after the light is extinguished (*After-Percept*). On being questioned on the experiment the next day he recalls the dazzling brilliancy of the light (*Re-presentative Image*).

(*b*) Pupils learn their lessons at home in the evening (*Perception*) and repeat them the next morning (*Re-presentation*).

The mind in each case has evidently performed at least *two* acts—it has *acquired* something; it has *reproduced* something. A little reflection will show that there was a *Stage of Retention* between the acts of acquisition and reproduction.

Hence the following **three well-marked stages:—**

I. **Apprehension.**—The *fixing* in memory.
II. **Retention.**—The *keeping* in memory.
III. **Reproduction.**—The *bringing* to memory.

MEMORY.

"When the mind acts in such a way that it records, retains and restores the ideas gained by its own activity, it is said to perform an act of memory."

Memory is not a special faculty but a general condition of mind. Without memory and attention mental operations would be impossible.

In ordinary language the term memory has especial reference to the retentive and reproductive stages.

RETENTION AND SUB-CONSCIOUSNESS.

We will now try to examine a little closer the retentive stage of memory. In the retentive stage the images are not actually before the mind; they are not in consciousness. Yet the mind has something to do with them, it retains them. To account for this the hypothesis of a *Sub-Conscious State* is formulated.

Example showing the Activity of the Sub-Conscious State.

I meet an old boy and cannot recollect his name. After leaving him I feel vexed at my lapse of memory, but other matters arise and crowd the incident out of consciousness. Some time (perhaps hours) afterwards the name suddenly leaps into memory. A reasonable supposition is that during all this time sub-consciousness has been active and has at last succeeded in finding the name. Viewed physiologically this activity is termed *Unconscious Cerebration.* Viewed from the mental standpoint it is sometimes termed *Sub-Psychical Activity.*

Consciousness and Sub-Consciousness.

Let D E A B F C (Fig. 50) represent the mind. The

smaller space (E A B F) represents consciousness; the larger space (D E F C) sub-consciousness. The absence of a line joining D and C represents the uncertain extent of the sub-conscious state. The line E F represents the *Threshold of Consciousness*—the boundary between the conscious and the sub-conscious state. This *Threshold* is not fixed, but rises and falls. Thus during sleep it rises and becomes nearly or quite identical with the line A B.

When we try to recollect something we endeavour to get the image out of the sub-conscious into the conscious region (Fig. 51).

Images fade away, that is, they go from consciousness into sub-consciousness. Images pass below the threshold, and sink deeper and deeper in sub-consciousness. The lower they get the more difficult it is to recall them. Thus the image D will (other things being equal) be recalled with more difficulty than C, and C than B (Fig. 52).
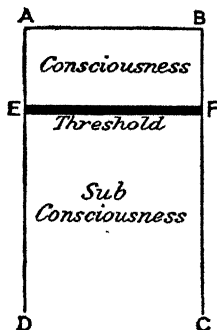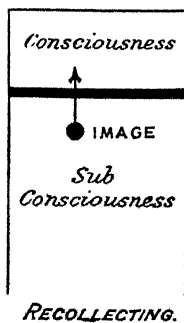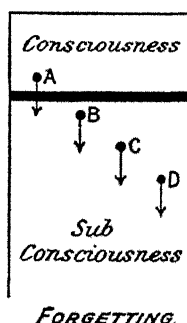
FIG. 50. FIG. 51. FIG. 52.

OBLIVESCENCE, PARTIAL AND TOTAL.

Many of our past ideas are capable of recall after more or less effort. Some of our past ideas would, however, seem to be beyond recall. Oblivescence or forgetfulness is the name given to the loss of power to recall a given image. Some, however, assert that every image is capable of recall. It is an axiom in physics that force is indestructible. The apprehension and retention of ideas is a form of mental

force, and it is argued that mental force like physical force is incapable of destruction. Certainly ideas that appear to be irrecoverable can be brought back to consciousness by an unusual stimulus.

REMEMBERING AND RECOLLECTING.

We have used these terms. We will now try to distinguish more clearly between them.

(*a*) I think of my first school. At once, without any conscious effort on my part many particulars concerning it "leap" into my memory. I *remember* the school exactly.

(*b*) A boy who is usually good at history cannot give his teacher the date of the Petition of Right. He cannot *remember* it. His teacher tries to help him to *recollect* it, and proceeds somewhat as follows:—

In whose reign was the Petition of Right presented?—Charles I.

Give dates of Charles' accession and death.—1625-1649.

What is the principal event in the reign of Charles I.?—The Civil War.

Was the Petition before or during the Civil War?—Before the war.

Was it then at the beginning or the end of the reign?—At the beginning.

Very well, let us think. 1625?—No. 1626?—No. 1627?—No. 1628?—Yes.

The pupil has been made to *recollect* the date.

When we revive ideas with little or no conscious effort, we are said to *remember* them. When conscious effort is involved, we are said to *recollect* them.

Hence Memory has two aspects:—

I. Passive memory. **Remembering**—little or no effort involved; *cf.* involuntary attention.

II. Active memory. **Recollecting**—effort involved; *cf.* voluntary attention.

Trying to Recollect. The physical accompaniments are the motionless body, the fixed look, the compressed lips, etc. These signs will help the teacher to judge whether the scholar is "trying" or not.

The will works through the attention, the mind is concentrated, disturbing influences are shut out, and the mind often becomes dimly aware of the *kind* of image that it is desired to call up.

EXAMPLES SHOWING VARIOUS DEGREES OF REMEMBRANCE AND RECOLLECTION.

(*a*) People who have witnessed some very painful sight—say a fatal accident—are often able to reproduce the details with minute exactitude. They say they will remember them till the day of their death.

(*b*) We can all recall exactly the multiplication table and many scripture texts, poetical extracts, etc., we learnt in childhood, whereas formulæ in the higher mathematics which were acquired later do not admit of such easy and accurate reproduction.

(*c*) Mr. X. is mentioned to me as being a former acquaintance. I cannot recollect anything about him until a photograph of Mr. X. is shown me, and then I am able to recall a large part of my connection with him.

(*d*) I have to give a lesson on Robert Walpole. I recollect that he was Prime Minister in the reign of George I., and connect him with the South Sea Bubble and a peace policy, but I cannot recollect any other facts concerning him, although I distinctly remember studying his life some years ago. I turn to my histories and "refresh my memory" upon the facts of his life, and re-master the details much sooner than I should master the details of an Italian statesman whose life I had never studied.

(*e*) I cannot remember what I had for dinner at any given date—say a year ago to-day—and no amount of effort on my part enables me to recollect.

(*f*) A teacher (who is a weak disciplinarian) gives a careful and well-thought-out lesson. A few of the most attentive pupils will be able to detail in their own words the whole of the lesson (*a′*), a few others will be able to recollect the lesson on being questioned upon it (*c′*), the greater part of the class will have imperfect recollection of parts of the lesson (*d′*), and a few pupils who are naturally indolent or who have been very inattentive will have practically no recollection whatever of the lesson (*e′*). So far as they are concerned it might just as well never have been given at all.

Such examples as these enable us to see that there are different degrees of recollection :—

1. Perfect remembrance (*a*), (*b*) and (*a′*).
2. Recollection after an effort (*c*) and (*c′*).
3. Partial oblivescence (*d*) and (*d′*).
4. Total oblivescence (*e*) and (*e′*).

Now it should be the teacher's aim to unfold his teaching in such a way, and to train his pupils in such habits, that the results of his teaching may approximate to perfect remembrance, or at least to recollection after an effort. Reproduction depends largely on apprehension. If we examine the conditions of reproduction we shall obtain valuable guidance as to what the conditions of apprehension should be. A re-examination of the examples given above will help us considerably.

CONDITIONS OF REPRODUCTION.

I. **Depth of Impression** dependent on :—

(*a*) *The Force of the Impression.* I cannot recollect what I had for dinner at a given date largely because the impressions (of taste, smell, repletion, sight, etc.) which the dinner gave me were not sufficiently forcible to make a lasting impression on my mind. But the sight of a fatal accident does make a powerful impression on the mind, hence the perfectness of the remembrance. The more forcible the impression the greater the depth of that impression.

> The mind might *in this case* be compared with a slate. If I write *lightly* with a nail, impressions are made which can easily be obliterated. If I write *heavily*, impressions are made which are as lasting as the slate itself.

Percepts strike the mind more forcibly than images. Hence the teacher should present *Things* and not *Words* for study.

(*b*) *The Frequency of Repetition.* Extraordinary impressions act upon the mind by reason of their unusual character or force. Ordinary experiences are fixed by repetition. The reason we can recall the multiplication table perfectly is largely owing to the fact that we have repeated it and used it an innumerable number of times. It should be carefully noted that the value of the repetition depends not only on the *number* of repetitions, but also upon their *frequency*. Fifty lessons on a subject,

given at intervals of a day or a week, will produce a more lasting impression on the mind than the same fifty lessons given at intervals of a month or a year.

Professor Sully gives an apt example illustrating the necessity for *frequent* repetition. "The process may be likened to that of damming a stream with stones. If we throw in stones with sufficient rapidity we may succeed in fixing a barrier. If we throw in one to-day and another to-morrow the effect of the first throw will be obliterated before the second is added."

We must be careful, however, not to rely too much upon repetition. Memory is not after all a kind of pantechnicon into which all sorts of odds and ends can be stowed by mere dint of pushing. The place and value of repetition in education will be dealt with later on.

(*c*) *The Degree of Mental Vigour at the time.* On page 118 the mind was compared with a slate. The comparison is, however, not correct in every particular, since the mind is active and the slate passive. The depth of an impression depends largely on the way in which the mind reacts on that impression. In childhood's days the mind is active and ready to respond attentively to percepts; hence one reason for our firm remembrances of those times

The degree of mental vigour is, of course, largely dependent on the degree of bodily vigour, and is shown chiefly in the amount of interest and voluntary attention displayed. (See p. 37.)

II. Association.

Let us re-examine case (*c*) (p. 117), in which I cannot recollect anything about Mr. X., a previous acquaintance, until a photograph of him is shown.

The name "Mr. X." is presented to me as an auditory percept (presentation). I say I cannot remember him, *i e.*, there is nothing in consciousness which I can connect with the auditory percept, "Mr. X." (Fig. 53).

I begin to try to recollect, and in doing so I bring into consciousness the re-presentation of the appearances of

many of my acquaintances, Mr. X. included (Fig. 54). But there is nothing to link the name Mr. X. with any of the re-presentations which I have.
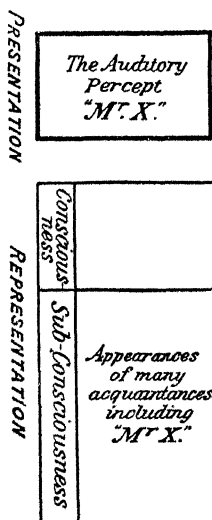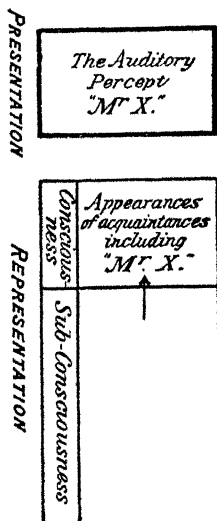
FIG. 53. FIG. 54.

A photograph of Mr. X. is now shown me (visual percept of Mr. X.). I have the re-presentation of the appearance of Mr. X. and of many other acquaintances in consciousness. I go over these very rapidly (so rapidly that I am often unconscious of the operation), reject those that are unlike the presentation, and find one that most nearly resembles it. The re-presentation of the appearance of Mr. X. comes thus "uppermost in my mind" (Fig. 55). I compare the photograph and this selected mental image, and find so many points of similarity that I come to the conclusion that the photograph and the mental image stand for one and the same person. Thus a bond of similarity (represented by the double bar in Fig. 56) connects the presentation with the re-presentation. There was no similarity between the

auditory percept Mr. X. and the re-presentative image Mr. X. (Fig. 54), hence there was no recollection. There is similarity now (Fig. 56); hence there is recollection.

Thus one kind of Association is Association by Similarity.
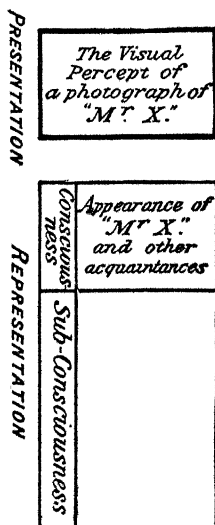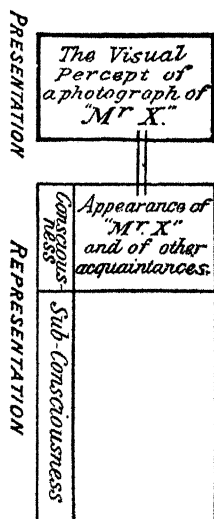
Fig. 55. Fig. 56.

By an act of attention the re-presented image of Mr. X. is kept in the mind, and held there, as it were, by the bond of similarity, and the re-presented images of other acquaintances fade away into sub-consciousness (Fig. 57).

But with the re-presentation of the appearance of Mr. X. are recalled certain facts connected with him. Thus I may recollect where, and under what circumstances, I last saw him. But the place where I last saw Mr. X. is nothing like Mr. X. himself. There is no working of similarity here. This association is of a different kind, is based, not on similarity, but on mere casual connection in time or place, and is known as association by contiguity (Fig. 58). **Hence**

there is a second kind of Association—that of Contiguity.
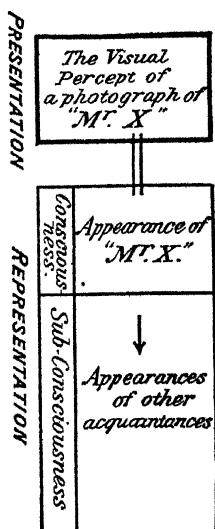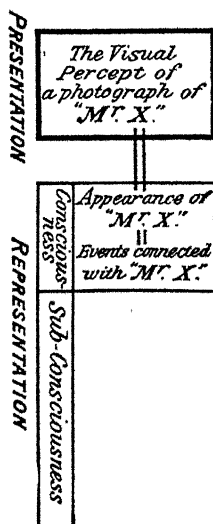
FIG. 57. FIG. 58.

In the above examples we have dealt with the workings of the law of similarity as between presentation and re-presentation. But the same law holds good between one re-presentation and another. I can recall a mental image (have a re-presentation) of the Matterhorn, and by the law of contiguity I recall the village of Zermatt at its base. But my re-presentation of the Matterhorn and Zermatt calls up, by the workings of similarity, re-presentations of Mont Blanc overtopping the village of Chamounix.

We have learnt two important things from these examples:—

1st. That Ideas are associated.

We cannot have an isolated idea. One idea depends or hangs on another. "Each idea, as it comes before us, reaches one hand back into the past and the other forward

into the future." If we could have an isolated idea we should soon lose it; there would be nothing in the mind for it to hang on.

The physiological basis of association is probably as follows: Two (or more) nerve structures that have repeatedly acted together acquire a disposition to act together. The stimulation of one calls the other into activity.

2nd. **That Ideas are associated in two ways—through Contiguity or through Similarity.**

Law of Contiguity.

"Presentations or impressions which occur together or in immediate succession will afterwards tend to revive, recall or suggest one another." (Sully.)

Law of Similarity.

"Present actions, sensations, thoughts or emotions tend to revive their like among previously recurring states." (Bain.)

From the definition it will be seen that contiguities may be of two kinds—those of space ("occur together") and those of time ("in immediate succession"). The most important case of connection in time is that of *Cause and Effect.* This connection becomes so strong that we rarely see an effect without curiosity as to its cause. Contiguity associates things adjacent in our experience; Similarity brings together things widely remote in order of time or place.

CONTRAST.

The idea "hot" suggests the idea "cold"; "tall" suggests "short"; "mountain" suggests "valley"; "vice" suggests "virtue," etc. Here we have an idea suggesting its *opposite.*

LAW OF CONTRAST.

"One impression tends to recall the image of its opposite."

Or the student may learn the law of similarity, substituting the word "opposite" for "like."

The law of contrast is a case of the primary operation of the intellect—the perception of difference. It is another way of stating the fact of discrimination (p. 22).

Probably the law of contrast may be resolved into the greater law of similarity. There must be a likeness in some respect; we do not contrast things different in all respects. Thus "virtue" and "vice" are alike in being forms of human conduct; "dwarf" and "giant" are alike in being forms of human stature.

IMPORTANCE OF THESE LAWS IN TEACHING.

From these laws we learn that a thing is recollected because:—

1. It is *like* some other thing—*Similarity*, or
2. It is *unlike* some other thing—*Contrast*, or
3. It has some *connection in time or place* with some other thing—*Contiguity*.

Of these three the most important are the laws of contiguity and similarity, and we shall proceed to examine in greater detail the working of these laws in the schoolroom.

EXAMPLES FROM SCHOOL LIFE OF THE WORKINGS OF THE LAW OF CONTIGUITY.

1. **The Association of the name of a thing with the thing itself.**—By the working of contiguity the child learns to call things by their proper names. It should be noted that there is nothing in the sound "dog" to suggest the idea "dog." If the word "dog" be said to a man unacquainted with English, it suggests no idea "dog" to him.

2. **Obedience to the word of command.**—The commands "stand," "sit," "right turn," etc., have been given so often, and, after more or less attention, have been followed so often by the appropriate action, that at last the sound at once leads by reflex action to the appropriate motion.

3. **Learning to repeat a sequence,** *e.g.*, the order of the letters of the alphabet, the multiplication table, etc.

4. **The verbal aggregate.**—I see the word "dog" and read it aloud. This is apparently a very simple operation.

A brief examination will convince us that it is not so simple as it appears. Let us endeavour to analyse it.

(*a*) I have a visual percept of the printed word "dog"—*The Visual Sign.*

(*b*) This visual sign calls up by contiguity the position of the larynx, tongue, etc., necessary for the pronouncing of the word—*the Vocal Sign*—and I pronounce the word "dog."

(*c*) My voice makes an impression on my ear. I recognise that my pronunciation of the word "dog" is correct—*Auditory Sign.*

(*d*) The visual, vocal and auditory signs call up a memory image (concept) of a dog—*Mental Sign.*

An attempt is made to represent this graphically in Fig. 59.
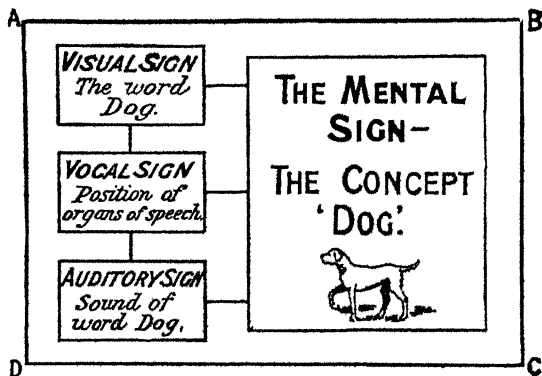
Fig 59.

The whole A B C D represents the verbal aggregate.

There is no element of similarity between these signs. They have occurred together, and have grown together. Their connection is one of contiguity. Any one of the signs should be sufficient to call up the others. Thus, on *hearing* the word "dog," the other symbols are called up probably in the following order:—

1. Mental symbol—the concept "dog."

2. Vocal symbol—the calling up of the vocal symbol is clearly seen when a person who listens to some exciting narrative falls into repeating some of the words after the narrator.

3. Visual symbol—the printed word "dog."

The mind is best affected when all the signs are present. Hence when we wish to grasp the meaning of a difficult passage, which we fail to understand by silent reading, we read it aloud—thus bringing both the vocal and the audi tory signs into play.

In educated persons the visual sign is, as a rule, sufficient to call up the mental sign. Partially educated people are obliged to mutter when they read, because they need both auditory and vocal signs for the calling up of the mental sign.

The child on entering school is in possession of three of these signs in a more or less complete state:—

1. He can pronounce the word "dog"—vocal sign.

2. He can hear some one else pronounce the word "dog"—auditory sign.

3. He can call up a rudimentary concept of a "dog" —mental sign.

The child, in learning to read, has to add the fourth sign —the visual sign—and firmly cement it to the others.

The Look-and-Say Method of teaching to read recognises that the child possesses three of these signs, and seeks to add the remaining one.

A child who comes across a difficult word (*e.g.*, hippopotamus) has merely a more or less imperfect visual sign. This does not call up any vocal sign (he cannot say the word); it does not call up any auditory sign (he does not know whether another scholar does or does not pronounce the word correctly). It is needless to say that no mental sign is called up (the word has no meaning to him). A child who can read a given word (*e.g.*, emu), but does not know its meaning, is able to call up all the signs except the mental one. The whole art of reading aloud correctly and

intelligently consists in being able to faithfully reproduce all these signs simultaneously.

The verbal aggregate plays an important part in language teaching. In learning a living language the ear and voice should be trained as well as the eye and the mind. Too often attention is pretty well exclusively directed to the visual and the mental signs and the vocal and auditory signs are disregarded.

EXAMPLES FROM SCHOOL LIFE OF THE WORKING OF THE LAW OF SIMILARITY.

1. **Matching Colours in a Kindergarten Exercise.**
2. **Obtaining a Law or General Rule from the Observation of Particular Cases.** After lessons have been given on water, milk, spirit, treacle, quicksilver, a lesson may be given with the object of pointing out the *Similarity* of these bodies and the term liquid may be introduced.
3. **Learning of Dates.** Sometimes dates may be learned by the application of similarity. Thus:—

12*15*. Magna Carta.
14*15*. Agincourt.
17*15*. Rebellion of Old Pretender.
18*15*. Waterloo.
18*37*. Accession of Victoria.
18*57*. Indian Mutiny.
18*87*. Jubilee.
18*97*. Diamond Jubilee.

4. **Recognition of the voice of a Singer and the Piano accompanying him as being in tune.** The child can tell the difference between the teacher's note in singing and the corresponding note when struck on the school piano, but there are sufficient points of resemblance for him to recognise the similarity of the two.

EXAMPLES OF THE CONJOINT WORKINGS OF SIMILARITY AND CONTIGUITY.

(*a*) A teacher temporarily forgets the name of a child in his class. He runs over in his mind the names on the register (contiguity) and identifies the boy (similarity).

(*b*) The sight of my new bicycle recalls the image of my old one (similarity), and the remembrance of many pleasant excursions upon it (contiguity).

(*c*) The name Macdonald may call up the name Flora Macdonald (similarity), and the stirring events of the Rebellion of the Young Pretender (contiguity).

Convergent and Divergent Associations.—The more

numerous the associations between one idea and other ideas, the more likely is that idea to be recalled. A child in reciting a poem has several aids helping him to recall the poem. Among these aids may be mentioned—the meaning the sequence of the words, the rhyme, the rhythm, the visual memory of the appearance of the page from which the passage is taken, etc. But the power to assist carries with it the power to prevent. Hence we have divergent or obstructive association. Allured by similarity of rhyme or metre the child runs one passage into another.
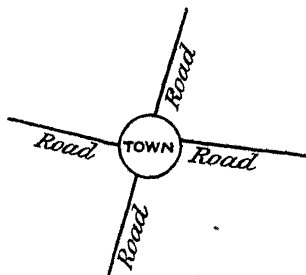
Fig. 60.

The situation may be compared with that of a town in which several roads meet. The multiplicity of roads is a help to the traveller outside the town who desires to get into it, but a hindrance to him when inside the town and desiring to get out in any particular direction (Fig. 60).

THE RELATIVE EDUCATIONAL VALUES OF ASSOCIATION BY CONTIGUITY AND ASSOCIATION BY SIMILARITY.

A child might associate water with milk because he has seen his mother add water to the milk before giving it to him to drink. This is association by contiguity. The percept "water" has often occurred in near time order with the percept "milk." The idea "water" has, as it were, *stuck* to the idea "milk." Little or no mental activity is involved.

Later on the child at home or in school notices or is made to notice that both water and milk pour out, have level surfaces, etc., and is thus led to discover a *likeness*

between the two liquids. A definite reason is established for the connection, *viz.*, certain well-ascertained points of similarity. In arriving at this reason the child has observed, remembered and reasoned. Curiosity may then prompt him to see whether other bodies have these properties.

Association by contiguity is an arbitrary association; it has no real meaning. Association by similarity is arrived at by the activity of the higher powers of mind, and stimulates the mind to reflection and investigation. Hence the intellectual superiority of association by similarity.

From this standpoint a training in elementary science may be regarded as superior to a training in language, because in science we search for similarities, whereas in language we search rather for contiguities.

CONDITIONS OF APPREHENSION.

By apprehension[1] is meant the process by which the mind takes hold of new ideas. On p. 118 we said that an examination of the conditions of reproduction would give a valuable insight into the conditions of apprehension. We have learnt that an isolated idea cannot remain in the mind; it must be associated with some other idea or ideas. **Hence Association of Ideas is an indispensable condition of Apprehension.**

A famous orator in answer to a question asking for the three conditions of good oratory is said to have replied: "The first is action, the second is action and the third is action." Similarly, it might be forcibly said: "The three conditions of good teaching are—first, association; second, association; and third, association;" and this association must be as strong as possible.

Conditions determining Strength of Association.

1. *The Kind of Association.*—As we have seen (p. 128) association by similarity is superior to association by con-

[1] This admittedly rough definition is in accordance with the etymology of the word. Apprehend = ad-prehend = ad prehendere = to take to, to hold to.

tiguity. The first aim of the teacher should thus be to associate by similarity. When he wishes to teach a new truth he should ask himself: "What idea or ideas akin to the new truth have my pupils already?" and he should frame his lesson so as to show how much the new truth is like the old one. The principle of leading *From the Known to the Unknown* is really an application of the law of similarity. Only when similarity is inapplicable should there be a resort to contiguity. Association by contiguity is the first resource of the weak teacher, the last resource of the strong one.

One teacher in dealing with the lengths of the diameter and circumference of the earth would write on the blackboard:—

Diameter of earth - - 8,000 miles;
Circumference of earth - 25,000 „

thus associating the two truths by contiguity.

Another teacher would take a hoop and would let the children measure the diameter and circumference with string, and discover that the circumference is a little more than three times the diameter. He would repeat with ball, etc. He would then proceed step by step somewhat as follows:—

(*a*) In a ball the circumference is a little more than three times the diameter.
(*b*) The diameter of the earth is 8000 miles.
(*c*) Then because the earth is like a ball in shape its circumference must be about 25,000 miles.

The second method is better than the first for the following reasons (among others):—

1. Operation (*a*) leads to active observation on the part of the children.
2. Result (*c*) was arrived at by the working of the law of similarity.

II. *The Frequency of the Association.*—Teachers of the old school placed great stress on repetition. Jacotot's motto was: "Repetition is the mother of studies." The mind was looked upon as a sort of receptacle into which things were to be stowed away by mere dint of pushing. A revulsion against this dependence on repetition has caused us to go to the other extreme—we are too apt to be contented with making our teaching clear and vivid, and with connecting it with previous

knowledge, and we forget the repetition necessary before the new is firmly cemented with the old. Truths learned through similarity do not require so much repetition as those gained through contiguity.

III. *The Force of the Association.*—The greater the force of the association the greater the depth of the impressions and the more lasting the association. Striking examples and an impressive earnest manner tend to give great force to an association. Things impress the mind more forcibly than words. Hence the truth of Pestalozzi's dictum: "Teach things rather than words." The percepts of some senses make more powerful impressions than the percepts of others. Thus sights are more powerful than sounds, sounds than touches, etc. Hence in teaching spelling, the teacher should appeal to the eye rather than to the ear.

IV. *The Mental Condition of the Pupil.*—This mental condition may be transient or permanent. If transient and unfavourable, endeavours should be made to remove the conditions that bring about the temporary change (p. 39). If permanent, repetition is necessary. It is by repetition that we make up for natural deficiencies—hence the extra drill of the awkward squad.

Kinds of Memory.

The teacher knows to his sorrow how different children are as regards memory capacity. He has in his class as many varieties of memory as he has children, but the following may be looked upon as types:—

(*a*) *The child with the well-nigh perfect memory*, which enables him to acquire easily, retain strongly and reproduce accurately.

(*b*) The "*sharp child*," who acquires easily, but is often lacking in retentive power—an exemplification of the proverb: "Lightly come, lightly go."

(*c*) The "*plodder*," who acquires slowly, retains strongly and reproduces slowly but surely.

(*d*) The "*dullard*," who acquires with painful slowness,

lacks strength of retention and fails hopelessly in reproduction.

Kant classifies memories as follows:—

1. *The Mechanical Memory*, which depends on associations by contiguities.
2. *The Ingenious Memory*, which endeavours to trace out more or less fanciful similarity between things. Mnemonics are an outcome of this type of memory.
3. *The Judicious Memory*, which depends mainly upon the natural working of the law of similarity.

Causes of the Differences of Memory.

The differences are partly native, partly due to education —the child may have been "born so," or may have been "made so." Too often a child's memory is spoiled by defective education, and the blame is placed on Nature.

Aims in the Culture of the Memory.

The aims are twofold:—

1. To acquire as much knowledge as possible.

2. To strengthen and develop the memory so as to make it the efficient instrument for the acquisition of more knowledge.

The second aim is the more important. The proverb, "Knowledge is power," has been responsible for much bad teaching. Theories which will not reduce to practice are the general result. What or how much information is acquired is of less consequence than *how* that information is acquired. Mere knowledge is not power; it is the *ability* to use knowledge which is power. We are "too apt to *furnish* the memory; we forget to *form* it."

Important Points to be noted in presenting Facts to Memory.

1. *Important Facts should be carefully discriminated from Unimportant Ones.* In the lower classes the teacher performs (or should perform) this discriminating process. It is in the upper classes that this rule is often violated. A child is told to "read up" so many pages of history; he makes an honest effort to do so, becomes overwhelmed with the mass of detail, and acquires but little benefit from the exercise. The teacher should go over any memory exercise with the child, he should draw his special attention to the

leading points, and show how the less important ones centre around it. In this way memory is economised.

Again, after a science lesson children can often describe the various stages of an experiment, but are unable to state clearly and accurately the great truth which the experiment teaches. We are too much concerned with teaching facts, we forget to teach children how to teach themselves. Pupils are rarely taught how to study, how to distinguish the relevant from the irrelevant. In some cases to know what may be forgotten is as important as to know what must be retained. "To know what to forget is the true secret of learning well."

2. *Facts should be Classified and Arranged.* Indiscriminate remembering of all sorts of odds and ends is a grave error. Things must be taught singly, but as soon as possible the units should be reviewed, classified and assimilated.

3. *Memory Work requires Time.* If facts are taught too quickly, "one on top of the other," the new crowd out the old. Time must be given for the matter to "soak in." Hence good teaching is never hurried but always slow, sometimes, indeed, almost painfully slow to the teacher.

Learning by Heart.

When facts are remembered by the sequence of *words*, as well as by the sequence of *ideas*, they are said to be learned by heart. Learning by heart is largely due to verbal association; it may be viewed as a case of association by contiguity.

In *learning by rote* the sequence of *words* is alone regarded, and the sequence of ideas disregarded. It is because learning by heart is confused with learning by rote that the former has fallen into such bad repute. If learning by heart includes an appeal to the intelligence it is of high educational value.

Things that may properly be Learned by Heart.

1. *Those things which have in themselves little or no meaning, e.g., important* dates in history, *important* data in

geography, the spelling of irregular words, the vocabulary of a foreign language. Necessity is the dictator here—necessity which knows no law. The important data in geography and history must be learned by heart; they have to serve as "pegs" upon which other things will hang. Fashion has imperiously decreed that correct spelling is one of the signs of education, and learning by heart is the only possible method of mastering the anomalies of English orthography. To a child who knows no Latin there is no *reason* that bread should be *le pain* in French; yet the equivalent must be learnt somehow, and learning by heart is the only possible solution.

2. *Beautiful passages in Literature*, because they express high and ennobling thoughts in choice language. They thus at the same time enlarge the child's vocabulary and develop his moral and æsthetic sentiments. It is needless to point out that "texts" from the noblest of all literature are included in this category.

3. *Various formulæ in Mathematics*, *e.g.*, the multiplication table, algebraical and trigonometrical formulæ, etc., because it is frequently necessary that we should have them at hand in a fixed and concise form.

4. *Definitions*, *e.g.*, definitions of important terms in a science, because they summarise our knowledge, enable us to retain it in a compact form, and are capable of being made efficient instruments in the acquisition of new knowledge.

Cautions on the Application of Learning by Heart.

Too often pupils are set to learn a "rule" one day and it is explained to them the next. This is an inversion of the true order, which should be experience first, memory afterwards. True teaching unfolds itself as follows:—

(*a*) Observation of particular cases.
(*b*) Classification of those particular cases.
(*c*) Deduction of rule or law.
(*d*) Memorising of that rule or law.

But we must not press this too far, and argue that a

child should be compelled to learn nothing that he does not thoroughly understand. We must recollect that there is a period of child life when the reasoning powers are little developed, whilst the powers of verbal memory are developed to a marvellous degree; that period when the child is "Wax to receive and marble to retain." A child might have but a poor comprehension of a beautiful passage of literature, yet if he have a fair idea of its general meaning the passage might be memorised with advantage. The fuller, deeper, richer meaning will come later on. If we deferred the teaching of things until they were thoroughly understood, many of the grandest truths would never be taught at all. We teach, and rightly teach, little children that "God is Love," yet how many children, nay more, how many *men*, realise its full meaning?

Some things that should not be Learned by Heart.

1. *Lists of Exceptions to a Rule in Grammar.* Some of the exceptions should have been noticed in the elaboration of the rule; others may be dealt with in its application. The child should know what to do with each exception *as it occurs*, but there is no practical advantage in his being able to repeat *seriatim* all or even the majority of the possible exceptions.

2. *Lists of Geographical Data, e.g.*, the capes and bays round England; the heights of the principal peaks in the Alps; the lengths of the rivers in South America; the populations of many countries and towns; exports and imports of particular countries, etc.

The child should have studied and drawn the map of England so frequently that he is able to call up a memory image of the map, and from this he should be able to select any important cape or bay that may be required. The appeal should here be to the *Visual*, not to the *Verbal* memory.

He might with advantage learn the height of Mont Blanc in *round* numbers and compare its height with Snowdon, because Mont Blanc (and Snowdon) will form a sort of standard to which other mountains may be referred. There

is no practical utility in knowing the exact height in feet of a score of Alpine giants, nor can any great truth be elicited from the figures. They burden the memory without enriching it. Still less reason is there for learning populations, since they are constantly changing, and what is true one day is not true the next.

Lists of exports and imports of particular countries should not be learned by heart. The child should learn by heart the chief organic productions of the various climatic zones; he should know something of the climate of the country in question and the industry of its inhabitants, and from these data he should infer the exports and imports of the country.

Mnemonics.—We have placed great importance upon recollecting things in their natural relationship one to another. If we endeavour to set up some more or less *artificial* connection between things, then we employ mnemonics. The recollection of numbers—as in dates—is one of the hardest efforts of memory, and the majority of mnemonic devices concern themselves largely with the learning of dates. An effort is made to reduce a *number* to *words* by assigning a characteristic letter for each of the ten cyphers. Most, if not all, systems of mnemonics become so elaborate that it is often little, if any, more trouble to learn the facts in the ordinary way. The teacher should look out for *natural* associations; mnemonics too frequently substitute an artificial for a natural association. Mnemonics may be applied where no means of natural association exists or where the association is a difficult and roundabout one.

A Few Examples of the Legitimate Use of Mnemonics.

1. The rules for the syllogism contained in *Barbara*, *Celarent*, etc.
2. The well-known rhyme: "Thirty days hath September."
3. A pupil who confuses the names *Bill* of Rights and *Petition* of Right, may be made to distinguish the two by recollecting that the *Bill* was presented in *Will*iam's reign.

Other instances will suggest themselves.

"Cram."—When information is rapidly and temporarily acquired, with little or no appeal to the laws of similarity, the information is said to be "crammed." Cramming appeals to the adhesive side of memory, the ideas are, as it were, "stuck on" to memory. It is often an appeal to

the verbal memory. Information which is crammed is never apperceived. See the chapter on "Apperception" (p 183).

THE GROWTH AND DEVELOPMENT OF MEMORY.

1. **Infant Life.**—*First to Third Year.*—Few of us can recollect facts in our lives that occurred before the age of three; hence some have made bold to doubt the existence of memory before that age. But the child of three has acquired some considerable mastery of his mother tongue, and this implies memory. And again, as we have observed (p. 22), conscious life starts with discrimination of a present state from a past one, and the knowledge of a past state implies memory. A rudimentary memory must be present at the dawn of life.

Others have gone to the other extreme and extolled the first three years as a period when the child learns more than during any other three years of his life. Commonsense adopts the "golden mean" between these extremes.

2. **Early Childhood.**—*Fourth to Ninth Year.*—During this period the mind is, so to speak, unoccupied, and fills itself without effort. The senses are busy in the acquisition of knowledge, and the memory in the storage of that knowledge. The mind is easily impressed, hence this has been designated the *Plastic Period of Memory*. The mind is passive rather than active; it allows the impressions to "stick" just in the order in which they are received, and makes practically no effort to classify and arrange those impressions. The law of similarity is but little appealed to, the law of contiguity seems to reign supreme. Towards the close of the period the teacher may begin to gently and cautiously stimulate the reasoning powers.

3. **Later Childhood.**—*Tenth to Sixteenth Year.*—The reasoning powers now begin to assert themselves more strongly. Feats of verbal memory become more and more distasteful; the memory ceases to be passive and becomes active. Search is made for connections between things. The law of similarity asserts its superiority over that of

contiguity, and the foundations of a *Logical Memory* are laid.

Summary.

Memory.

"When the mind acts in such a way that it records, retains and restores the ideas gained by its own activity, it is said to perform an act of memory."

Memory implies :—

1. *Apprehension*—fixing in mind.
2. *Retention*—keeping in mind.
3. *Reproduction*—bringing to mind.

Reproduction depends on :—

1. *Depth of Impression :* dependent on :—
   (*a*) *Force of Impression.*
   (*b*) *Frequency of Impression.*
   (*c*) *Mental Vigour.*
2. *Association.*
   (*a*) *By Similarity.*
   (*b*) *By Contiguity.*

Law of Similarity.—Present states tend to revive *their like* among previously recurring states.

Law of Contiguity.—States occurring together, or in immediate succession, tend to recall one another.

Association by similarity is superior to association by contiguity.

Aims in the Culture of Memory.

1. To acquire as much knowledge as possible.
2. To strengthen the memory and make it the efficient instrument for the acquisition of more knowledge.

QUESTIONS.

1.—Show the uses and dangers of learning by heart and illustrate these in the case of (1) a lesson in geography, and (2) a passage of poetry. Mention parts of school work in which this method is essential and parts in which it should be used sparingly. (E.D.)

2.—Discuss the comparative value of memory of words and memory of things. In what way may they be cultivated? How could you use them in a geography lesson for beginners? (E.D.)

3.—What bad mental habits are liable to result from the exclusive study of (1) language, and (2) physical science respectively? (E.D.)

4.—State concisely some of the common abuses of memory in teaching and show in each case how they violate educational principles. (E.D.)

5.—"In no other mental faculty do people show such variety of power as in memory." Explain clearly by what differences of mental constitution such varieties of power of memory are caused. State the principles that would guide you in meeting the consequent difficulties of dealing with the memory work of a large class (E.D.)

6.—Say what are the intellectual processes concerned in an effort of memory. State in what way such an effort is dependent on the principles of association. (E.D.)

7.—Give a full analysis of the process of learning by heart a verse of poetry. (L.U.)

8.—Most acts of memory depend on established sequences or trains of ideas. What use should be made of this truth in teaching and how may it be used wrongly? (L.U.)

9.—What do you understand by cramming? (L.U.)

10.—Enumerate the general conditions favourable to retentiveness. Illustrate from your experience Mr. Bain's statement that "the making of impressions on the brain is exceedingly unequal at different times." (L.U.)

11.—"Repetitio mater studiorum." What methods do you employ to secure repetition so as not to extinguish curiosity and encourage mechanical habits? Illustrate your answer with reference to the teaching of language. (L.U.)

12.—Distinguish clearly between the loading of the memory with facts and its discipline as an intellectual power. How can it best be trained in accuracy as well as rapidity of action? (L.U.)

13.—Give the pros and cons for learning dates by heart. Would you encourage *memoria technica*? (L.U.)

14.—Explain and discriminate between the two chief functions of memory and point out the best means of strengthening them in school. (E.D.)

15.—Criticise: "For the training of mere memory, science is as good as (if not better than) language. It has an immense superiority in the kind of memory it trains." (Spencer.) (E.D.)

16.—State and classify the chief kinds of mental association and give one example of each in ordinary school work. (E.D.)

17.—Give a short account of the law of association known as contiguity and illustrate its mode of action (*a*) in an object lesson, (*b*) in a history lesson. (C.P.)

18.—Give a short account of the mental process known as "learning by heart," bringing out the psychological principles illustrated. How would you distinguish the proper use and the abuse of memorising words? (C.P.)

19.—What kind of lesson—if any—should be learned by heart by very young children? Give reasons and illustrations. (C.U.)

20.—What is meant by unconscious states of mind, and what is the evidence for their existence? (V.U.)

21.—Examine the following: "To exercise and improve the memory is allowed by all to be one chief part of the business of the educator, and more especially the school teacher." (C.U.)

22.—Describe memory. How far does memory differ in character in different individuals? Upon what conditions, physical and mental, does a good memory depend? Explain the reason for Goethe's statement: "When interest goes, memory also goes." (V.U.)

23.—What do you understand by a "train of ideas," and how is its order explained? What are the more important differences between the sequences of ideas in the case of a child of six, and of an educated adult? (C.U.)

24.—Analyse fully the mental process called "trying to remember." (V.U.)

25.—Explain the chief conditions favourable to the reproduction of knowledge. Analyse in detail the process of recalling a person's name. (V.U.)

26.—State your views about the right use of recapitulation in teaching. (C.U.)

27.—What do you understand by the "laws of mental association"? Say what practical bearing this question has on any one subject of ordinary instruction. (C.U.)

28.—Consider the nature and psychological basis of repetition and its place in school work. (V.U.)

29.—"Recognitions of agreements make up the half of what we term knowledge." Briefly illustrate this, and point out (1) the circumstances that promote, and (2) the circumstances that prevent such recognition. (C.U.)

CHAPTER IX.

IMAGINATION.

Examples of Imagination.

(*a*) The children have paid a visit, we will suppose, to a neighbouring hill. They have noted its shape, the soil of which it is composed, the vegetation on it, the time required for its ascent, and have contrasted the view from its summit with that obtained from its base. In the classroom the teacher requires the children step by step to give an account of their visit. Little by little the various memory images are brought forward, and at last a complete picture or mental image of a hill is before the mind.

(*b*) On subsequent occasions he tries to *add* to this mental image of a hill. The hill the children know required, we will suppose, a quarter of an hour for its ascent. The teacher endeavours to get them to imagine a "hill" that requires 3, 6, 12 or more hours to reach its summit. On a dull day a cloud has been noted resting on the top of the hill. The teacher pictures a "hill" so high that clouds rest on its summit even on some fine days. The children have noticed that the grass does not grow as freely on the top of the hill as in the valley. The teacher describes a "hill" so high that the summit is bare of vegetation. They have observed that in the winter the snow often remains on the top of the hill some hours after it has melted in the valley. The teacher proceeds to summarise by drawing a word-picture of a very high "hill," the ascent of which takes some hours, which has a summit sometimes enveloped in clouds, bare of vegetation, and covered more or less throughout the year with snow. The children should now have a fairly correct mental image of a *Mountain*.

But the image of the hill is different from the image of the mountain. The image of the hill is composed of a

number of revived percepts which are grouped in exactly the same way as were the original percepts. The image of the hill consists of reproduced percepts—it is the result of *Reproductive Imagination.*

The image of the mountain is based on revived percepts, which, however, have been modified, transformed, transferred and recombined. Thus a child who has a complex percept "snow on hill-top in winter," and also a percept "summer," modifies the first percept, combines it with the second, and obtains an image "snow on high hill-top in summer." The image of a mountain to a person who has never seen one is a *Constructed* image—the product of *Constructive Imagination.*

DEFINITIONS OF IMAGINATION.

1. Imagination is the process of making images.

The word "image" is a much abused one in psychology. (See p. 111.)

It is variously employed to denote:—

(*a*) *A Percept*—a questionable use of the term.

(*b*) *A Revived Percept*, (*c*) *A Revived Concept*, (*d*) *A Result of Constructive Imagination*, } allowable uses of the term.

2. Imagination is "the mind's power of making pictures without the present help of the senses."

KINDS OF IMAGINATION.

I. Reproductive Imagination.—The process of reviving percepts in the time and place order of their occurrence.

This kind of imagination has been already dealt with in the chapter on "Memory" (p. 110).

II. Constructive Imagination.—"The process by which we recall past percepts and form them into totally new combinations, the like of which have never come within our experience."

It is Constructive Imagination that will chiefly concern us in this chapter, and for the sake of brevity constructive

imagination will be designated imagination simply. Imagination in its popular sense means constructive imagination.

Imagination not a creative but a constructive process.

Imagination is sometimes spoken of as a creative faculty of mind. But imagination is a process of rearranging ideas already in the mind, a process of working up old experiences into new forms. It is a *constructive* and not a creative faculty. "It is as impossible to create in the mental as in the material world."

Examples showing the Kinds of Activity involved in Imagination.

(*a*) In a museum a child has seen a knight's suit of armour placed, we will suppose, on a landing in immediate proximity to pictures, busts, etc. The teacher is giving a lesson on the tournament. The child recalls the image of the armour standing on the landing near the pictures, etc. He *isolates* the suit of armour from its surroundings.

(*b*) He calls up images of man and horse, places the man, as it were, inside the armour and upon the horse, and begins to imagine a knight ready for the tournament. He has *combined* parts or wholes of several memory images.

The two Processes involved in Imagination.

I. *The Isolating Process*, in which certain elements of a complex process are omitted and others are retained (*a*).

II. *The Combining Process*, in which parts or wholes of other revived percepts are taken and joined with the isolated percepts obtained above (*b*).

AN ATTEMPT TO ANALYSE THE PROCESS OF IMAGINATION.

I. *The "Cue."* The mind starts with a dim and hazy notion of the sort of image that has to be formed. The notion is, however, not clear and well defined; if it were, the act of imagination would be complete. The mind is dimly conscious of its existence, insomuch as there is a feeling of incompleteness which leads to the next stage.

II. *The Presentation of Images to the Mind.* This vague feeling of incompleteness leads the mind to search among its

store of images for the kind of image that is lacking, and numerous images are produced. Some are rejected as useless, others retained.

III. *The Isolating and Combining Activity.* Parts or wholes of these images are felt to be in agreement with the shadowy first image termed the "cue." They combine with it and with one another, and cause the original shadowy image to become more and more distinct.

IV. *A Feeling of Satisfaction* pervades the whole process. There is a sense of fitness in the fact that the revived images seemed to "fit" the "cue," and at the end of the process this feeling is enhanced by the emotion of power, insomuch as the region of the known has been increased and that of the unknown sensibly diminished.

THE IMPORTANCE OF THE IMAGINATION.

Not a few writers have decried the imagination, and some have gone so far as to regard it as directly opposed to the reasoning faculty. The antagonism of fact and fancy has been exaggerated, and fancy (and with it the imagination) has suffered an undeserved rebuff. Now "fact" is based on perception, and, as we have seen (p. 60), perception and imagination are inseparable, for in sense-perception the revival of images (*i.e.*, imagination) plays an important part. We have already said that it is the *ability* to use knowledge which is power. "A person is not well equipped mentally who cannot apply his knowledge in new ways and under new conditions." Knowledge can be applied to new cases in two ways:—

1. By *picturing* out the process and the effect of the application of the new knowledge—*Imagination.*

2. By *inferring* the application and effect of the new knowledge—*Reasoning.*

In science the imagination yields hypotheses; in ordinary life the imaginative person is often the one who is quick to see a point or who quickly jumps to a conclusion.

Imagination is the complement of observation, and supplies us with knowledge unobtainable in any other way.

STRIKING DIFFERENCES IN THE IMAGINATIVE POWERS OF CHILDREN.

It is commonly supposed that *all* young children are very imaginative. Undoubtedly normal children coming from good homes are usually "fancy full," but among the poorer classes in our large towns is found a considerable proportion of children who seem to have been "born old," to have come into the world after their age of imagination has passed. The eyes of these children rarely open wide with childish wonder, still less frequently do they evince any curiosity, their games are few, they never play at "make-believe," and the delights of a childlike flight of imagination are to them unknown. Children only in name are these little stolid lumps of humanity! The earnest teacher finds them one of the problems of his class. The only course that seems open is to arouse imagination by *striking* appeals to curiosity and wonder.

With the majority of children, however, early childhood is the period of the precocious development of the imagination. Uncontrolled by experience and judgment, a child's imagination runs riot in fancy.

The term fancy is here used as a sort of exaggerated imagination—one far removed from nature and fact.

TRAINING OF THE IMAGINATION.

Aided by imagination, the child's natural activity seems, as it were, to run over, to affect inanimate objects and to endow them with life. The doll is to the girl a *real* baby, the wooden horse is to the boy a *real* horse, even the stones become men and women, the big ones mothers and fathers, the smaller ones boys and girls. The child lives in a world of play, folk-lore, fairy tales and nursery rhymes. Some of the apparently far-fetched resemblances of the kindergarten are very real to the child. There seems a danger that at one period of child life fancy will be confused with fact. Hence it has been asserted that the imagination is a pernicious thing that must be crushed out. But the season

of the riot of the imagination is a short one, and as Compayré says, the daylight of reason comes quite soon enough and dissipates the shadows and phantoms of the imagination. It may at times be wise to moderate a child's fancy, it cannot but be unwise to endeavour to crush it. The person who tries to stifle a child's imagination may be strangling an embryo artist, or poet, or inventor.

About the age of six or eight years the imagination begins to evince signs of being brought more and more under control, and as knowledge grows and experience widens, the child begins to wonder whether the fairy tales are really true, and to show a decided preference for "true tales" (*i.e.*, tales not opposed to his experience) based on narratives from real life. So far, the imagination has been largely passive; it now begins to assume active characteristics. Childish invention commences to assert itself, and the child finds pleasure in modelling, pattern making and elementary drawing.

By the age of nine or ten the average child has mastered the more common of the mechanical difficulties of reading, and is able to follow what he reads, *i.e.*, he has a sufficient store of images to enable him to construct from them the images appropriate to the text. If he is a studious child he now enters upon a second imaginative period in which tales of adventure, etc., largely figure, but, unlike the first period, this one is dependent on, and is controlled by, previous experience. He now enters seriously upon the study of history and geography.

History and Geography.[1] These are *par excellence* the school studies that appeal to the imagination, and mistakes are often made in appealing to it too early. Distinctness of imagination, as we have seen, depends on the distinctness of sense-percepts. Clear images can be built up upon a sensory basis only. To imagine well we must begin by seeing well. Hence the first lessons in history and geography should be given upon objects and physical phenomena which are within the purview of the child. When these are ex-

[1] For illustrations, see pp. 140 and 142.

hausted the imagination should be appealed to; "things near" should be made the basis of the explanation of "things far," and rough analogies should be drawn between what has been seen and what has to be imagined. Clear images are built up gradually, and the teacher must by frequent and searching questions discover whether the images are being built correctly. Models and pictures are valuable aids, and the word-pictures the teacher himself paints are very potent. Some teachers commit the error of explaining too much; they forget to leave the imagination something to play on.

Literature appeals powerfully to the imagination. The fairy tale gives us our first taste of imagination in literature. Tales of travel soon supplant them. Then begins the reign of the novel, which supplies many persons with the only material upon which they exercise their imagination.

Summary.

Imagination is the process of making images. An *Image* is a revived percept or concept.

Imagination { 1. Reproductive.
2. Constructive. Known popularly as imagination.

Analysis of Process of Imagination.

1. *The "Cue."* A notion of the end to be attained.
2. *The Presentation of Suitable Images to the Mind.*
3. *The Isolation and Combination of those Images.*
4. *The Feeling of Satisfaction* from the fact that the image formed is in conformity with the cue.

Imagination in Science yields the hypothesis.

School Subjects appealing especially to the Imagination —History, geography and literature.

QUESTIONS.

1.—What is imagination? What different kinds of imagination are there? What is meant by disciplining the imagination of children? (C.P.)

2.—Explain the psychological difference between: (*a*) recalling the impression of some part of London which is familiar to us; (*b*) forming a mental image of the appearance of old London before the great fire. How is it that good pictures help us so much in carrying out the latter process? (C.P.)

3.—Take any fact not directly presentable to the senses, such as a historical event, and explain fully the process which the child's mind goes through in grasping the fact.

How does the choice of words in setting forth the fact further or hinder the process? (E.D.)

4.—Describe the mental process by which a child's mind follows a historical narrative, explaining the part taken by constructive imagination and assimilation. (C.P.)

5.—What are the main causes of distinct and of indistinct mental images? Show how a knowledge of these causes may help the teacher in developing a child's imagination. (C.P.)

6.—Describe the characteristics of children's imagination, and suggest how education has to adjust itself to this side of the child's mind. (C.U.)

7.—Distinguish imagination from memory. Explain the uses and abuses of imagination from the educator's point of view. (V.U.)

8.—Analyse the psychological processes involved in the recognition of a picture as representing a familiar historical scene. (V.U.)

9.—Point out how productive imagination differs from memory and distinguish the various forms of productive imagination (V.U.)

CHAPTER X.

CONCEPTION.

Examples of the Manner in which General Notions are formed.

(i.) A young child often plays with a *sheep dog*. At first he looks in a cursory way at the dog as a whole; his attention is not sufficiently cultivated for the observation of details. But in the course of time, as his powers of attention become stronger, he gains a more or less detailed knowledge of the dog, and notes, we will suppose, that *it runs about, barks, has four legs, is larger than himself, and has a brownish coat.* He hears others call this thing a "*dog.*"

A *dog* then to him is a something which—

(*a*) Runs about;
(*b*) Has four legs;
(*c*) Barks;
(*d*) Is larger than himself;
(*e*) Has a brownish coat.

(ii.) He next sees and examines a *retriever*, whilst, let us suppose, the sheep dog is present; hears the retriever called "*dog*" and notes that it—

(*a*) Runs about;
(*b*) Has four legs;
(*c*) Barks;
(*d*) Is larger than himself·
(*e*) *Has a black coat;*

whereas the sheep dog—

(*a*) Runs about;
(*b*) Has four legs;
(*c*) Barks;
(*d*) Is larger than himself;
(*e'*) *Has a brownish coat.*

The recurrence of the properties (*a*), (*b*), (*c*) and (*d*) impresses them upon the memory. The difference between the percepts (*e*) and (*e'*) causes temporary confusion, and the percept (*e*) commences, as it were, to neutralise the percept (*e'*). The percepts (*a*), (*b*), (*c*) and (*d*) become fused together, are abstracted from the confused detail, and the child now comes to the conclusion that a *dog* is a something which—

(*a*) Runs about;
(*b*) Has four legs;
(*c*) Barks;
(*d*) Is larger than himself.

He has had two percepts:—

(1) Of the *sheep dog*, with attributes (*a*), (*b*), (*c*), (*d*).	(2) Of the *retriever*, with attributes (*a*), (*b*), (*c*), (*d'*).

From these two he has elaborated a "*notion*," with attributes (*a*), (*b*), (*c*).

He has not seen anything with attributes (*a*), (*b*), (*c*) alone: **he has thought the two percepts into one notion.**

(iii.) Later on he sees a *spaniel*, hears it called "*dog*" and notes that it is a something which—

(*a*) Runs about;
(*b*) Has four legs;
(*c*) Barks;
(*d*) *Is smaller than himself;*

whereas his notion "*dog*" is a something which—

(*a*) Runs about;
(*b*) Has four legs;
(*c*) Barks;
(*d*) *Is larger than himself.*

There is again temporary confusion, neutralisation of the differences and abstraction of the attributes (*a*), (*b*), (*c*).

His notion "*dog*" now is a something which—

(*a*) Runs about;
(*b*) Has four legs;
(*c*) Barks.

This Notion "Dog" is not a Percept nor an Image.

It is not a percept, for we have defined perception (p. 60) as the reference of sensation to definite objects. Now the child does not refer his notion "*dog*" to any definite object—he has encountered no object which has merely the properties of *motion, four-leggedness* and *barking*.

It is not a reproduced image, for such an image is a revived percept (p. 141), and this notion "*dog*" never was a percept.

It is not a constructed image, for a constructed image might gain its materials from widely different percepts, whereas this notion has been obtained from percepts of things having many points of resemblance. It lacks too the definiteness of an image; it is at the best but an ill-defined image, in which "individual differences are blurred, and only the common features stand out distinctly." The child might have recalled a memory image of the *sheep dog*, another of the *retriever*, and a third of the *spaniel*. Instead of this, his mind has *taken together* the three images and formed them into a *Concept*. (L., *con*, together; *-cipio*, *-ceptum*, I take.)

Now the name *dog* is a general name (common noun). A concept is then a notion corresponding to a general name.

DEFINITION OF A CONCEPT.

A Concept is "a re-presentation in our minds answering to a general name." (Sully.)

Concepts are variously termed generic images, general notions, group notions, class notions or ideas.

DEFINITIONS OF CONCEPTION.

(i.) **Conception is a mental process which results in a Concept.**

An attempt has been made in the early part of the chapter to detail this mental process. It must not be assumed that every child passes through the process exactly in the way described; probably few, if any, children have ever passed through all the stages exactly as detailed, but the study of an ideal case, like the one given above, will,

it is hoped, help to throw some light upon the difficult and intricate process of conception.

Conception does not deal with individuals, but with classes. "If human intellect were limited to representing individual objects presented by sense-perception, our minds would, like a mirror, reflect what was about us. The world within would duplicate the world without. The ideas with which the memory is stored represent, not single things, but classes of things." Viewed in this light, *viz.*, that of memory economy, we have the following definition :—

(ii.) **"Conception is the power to think individuals into classes"—the power "to think the many into the one."**

A CAUTION.

We must clearly and carefully distinguish between :—

1. The Process.	2. The Result.
Conception.	Concept.
Imagination.	Image.
Perception.	Percept.
Sensation.	Sensation.

Another Example of the Process of arriving at a Concept.

As it is most important that the student should understand the conceptive process, the skeleton outlines of another process of arriving at a concept are given. The student should re-read pp. 148 and 149 and write the following in fuller form :—

(i.) *Percept or Revised Percept (Image) of Nursery Rhyme Book* contrasted with *Percept of School Primer*

(*a*) Consists of leaves fastened together.	(*a*) Consists of leaves fastened together.
(*b*) Contained in a cover.	(*b*) Contained in a cover.
(*c*) Has printed matter.	(*c*) Has printed matter.
(*d*) *Has coloured pictures.*	(*d*) *Has uncoloured pictures.*

produces

First Provisional Concept of Book.

(*a*) Consists of leaves fastened together.

(*b*) Contained in a cover.

(*c*) Has printed matter,

(*d*) Has pictures.

(ii.) *Percept or Image of Note Book* contrasted with *First Provisional Concept of Book*

(*a*) Consists of leaves fastened together.	(*a*) Consists of leaves fastened together.
(*b*) Contained in a cover.	(*b*) Contained in a cover.
(*c*) Has no printed matter.	(*c*) *Has printed matter.*
(*d*) Has no pictures.	(*d*) *Has pictures.*

produces

Second Provisional Concept of Book.

(*a*) Consists of leaves fastened together.
(*b*) Contained in a cover.

(iii.) *Percept or Image of Book which has lost its cover* contrasted with *Second Provisional Concept of Book*

(*a*) Consists of leaves fastened together.	(*a*) Consists of leaves fastened together.
(*b*) *Has no cover.*	(*b*) *Contained in a cover.*

produces

Final Concept of Book.

Consists of a number of leaves fastened together
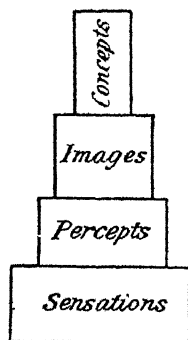
FIG. 61.

SOME OF THE THINGS THAT CAN BE LEARNED FROM THE EXAMPLES GIVEN.

I. That Sensation is the Basis of Conception. We have seen how *Sensations* produce *Percepts* (chap. iv.), that *Percepts* yield *Images* (chap. viii.), and we have just learnt that *Images* give rise to *Concepts*.

An endeavour to represent this graphically is made in Fig. 61,

Conception is impossible without a sensory basis. "Percepts must be in order that concepts may be."

II. **That a knowledge of Things is a necessary preliminary to the process of Conception.** This follows as a corollary to the above, for the only way we can get sensations is through things.

III. **That knowledge is at first individual and concrete, and afterwards general and abstract.** Perception, observation, memory are early operations and are closely associated with actual objects—they are processes largely concrete and particular. A concept is a later product and does not associate itself with any particular thing; it is abstract and general.

IV. **That conception is essentially a process of Abstraction.** This will be dealt with under "*Stages in Conception.*"

V. **That concept-building is a gradual process.** A true concept is reached only after the examination of many things of like kind.

COMPARISON OF PERCEPTS, IMAGES AND CONCEPTS.

Percept.	Image.	Concept.
Based on Sensation.	Based on Percepts.	Based on Images.
Is presentative.	Is re-presentative.	Is re-re-presentative.
Gives knowledge of the presence of a thing.	Implies remembrance of a thing.	Implies knowledge about classes of things.
A "reality."	A "picture."	A "symbol."

STAGES IN CONCEPTION.

A re-examination of the examples showing how the concepts "*dog*" and "*book*" may be obtained will facilitate the comprehension of the following description of the stages of conception.

I. **Observation.**—Two or more individuals resembling one another in one or more particulars are brought together either as percepts or as images.

II. **Comparison.**—But when similar percepts or images are presented to the mind, there is an innate tendency to compare and contrast them, and to pay special attention to the points of resemblance.

III. **Abstraction.**—The special attention paid to the resemblances draws or abstracts those resemblances from the differences. These abstracted qualities grouped together form the concept. Prof. Sully defines abstraction as "the withdrawing of the attention from certain things in order to fix it on others."

IV. **Generalisation.**—The concept becomes clearer in the mind; other individuals are noticed having qualities which agree with those of the concept, and gradually the idea is reached of a class of things having certain characteristics (those of the concept) in common.

RELATION OF CONCEPTS TO NAMES.

The examples we have studied have led us to see that there is a very close connection between conception and naming. On this question philosophers were formerly divided into two camps:—

The Realists,	**The Nominalists,**
who said that in the region of external existence there is a something corresponding to the general term; that there was an actual dog answering to the term "dog" as distinct from a *sheep dog*, *retriever*, etc. This theory is called **Realism.**	who say that there is in external existence nothing corresponding to the general term. This is in distinct opposition to the Realists. They say that the general name is "merely a sign applicable to any object of a certain kind." This theory is called **Nominalism.**

Practically there are no Realists now. The contest lies between the *Nominalists* and a new class who take their position from a psychological rather than a metaphysical standpoint:—

The Conceptualists,

who assert that the mind has the power of picturing ideas of classes of things. These ideas are the representations of the common features of many similar things. This theory is termed

Conceptualism,

Examination of Examples of Indistinct Concepts.

1. A child's father has, we will suppose, a black beard. The child learns to call him "dada." The distinctive mark "having a black beard" answers to the name dada. When he sees another man with a black beard he calls him dada too.

   The child has abstracted one striking but not characteristic quality from the number of qualities which serve to distinguish his father from other men. The mistake arises from hasty generalisation founded upon insufficient abstraction. The child has yet to make other and more characteristic abstractions before he has a sufficiency of marks to distinguish his father from other men. The obtaining of these additional abstractions depends upon many acts of perception and observation. So as we go deeper into the matter, we find that the real cause is insufficient perception and observation. That this is so is seen from the fact that the child will rarely call other women "mamma." The infant sees more of his mother than his father, more of women other than his mother than of men other than his father. He has more abundant facilities for comparing one woman with another than he has of comparing one man with another. The increased opportunities for perception and observation lead to more correct abstractions and more perfect concepts.

2. Many persons call the whale a fish. The characteristic mark, living in the water, answers to the term fish. No opportunities have arisen of examining a whale and comparing it with a fish. The error is mainly due to lack of observation.

3. Children apply the term circle to a ring, a penny, a ball, an egg, a hemisphere, a sphere, etc. The error is partly due to lack of observation, but also to the fact that the child hears the term circle loosely applied to these figures, and unconsciously conforms to general usage. Hazy concepts have produced a loose use of language, and a loose use of terms serves to produce more hazy and inaccurate concepts.

4. Teachers are sometimes too indiscriminate in their praise or blame. The child hears himself and others called "bad boys" for the commission of the most trivial offences. He comes to the conclusion that it is not so very dreadful after all to be a bad boy. The teacher, by a loose use of language, has led the pupils to a false conception of bad conduct, and what is more unfortunate, has done some-

thing to lower the child's moral tone. Similar, but perhaps less direful results, follow from the use of indiscriminate praise.

5. I have not studied chemistry for some years, but having necessity to refer to a work on chemistry, which I studied and thoroughly understood some years ago, I find that many points in it are no longer clear to me, and I come across terms the meaning of which I do not fully understand. My concepts are here imperfect obviously through lapse of time and imperfections of memory.

CAUSES OF INDISTINCT CONCEPTS.

A consideration of the above examples will enable us to see that these causes are:—

1. Indistinct percepts.
2. Faulty or insufficient observation.
3. Imperfect abstraction.
4. Loose use of language.
5. Lapse of time.
6. Imperfections of memory.

SOME MARKS OF GOOD CONCEPTS.

These may be gathered from the examples given in this chapter. The chief qualities of good concepts are:—

1. They are founded on concrete examples.

2. They have a wide basis of experience, so that possible error is eliminated.

3. They are definite. The characteristics of the concept are distinctly represented in the mind, and there is no risk of confusion or coalescence with concepts of a somewhat similar kind.

REASONS WHY POWERS OF CONCEPTION SHOULD BE CULTIVATED.

1. **Conception culture increases the vigour and number of mental operations.** This follows from the fact that many important mental faculties are involved in an act of conception.

2. **Conception culture economises mental force.** Conception is the power to think the many into one. If

we did not possess the faculty of conception we should find our minds overburdened with innumerable particulars.

3. **Conception culture makes the higher reasoning possible.** The higher reasoning, as we shall learn in the next chapter, is concerned with classes and not with units. Conception deals with classes, and is really the first stage of reasoning.

4. **Conception culture makes science possible.** Science is concerned with generalities based upon particulars. This is the speciality of conception. Without conception the classifications, the theories, the laws of science would be impossible.

GROWTH AND TRAINING OF CONCEPTION.

I. **Infancy.**—During infancy the mind is concerned with sensations and percepts rather than with concepts. The infant's sphere lies in the concrete and the individual rather than in the abstract and general. Language, as we have seen, is a great aid to conception, indeed it may be doubted whether any conceptual power worthy of the name is in existence before the child learns to talk. Conception comes late, and its true progress is slow.

II. **Early Childhood.**—For some time the child's knowledge remains for the most part particular and individual. The general name "house" recalls to the child the particular house in which he lives, the term "bird" the familiar sparrow or the pet canary. Individual percepts crowd in upon the child, and there is danger of his being overwhelmed with the mass of ungeneralised particulars. Refuge is found in the detection of similarity amidst diversity. This is the essential process in conception. There is an innate tendency of the mind to detect similarity between things; this tendency is materially assisted by language and rudimentary classification results. Adjectives imply qualities, and the use of adjectives in the vocabulary marks an ability to differentiate one quality from another—a definite stage in the process of abstraction and conception.

Much of the classification in which the child indulges at this stage is hasty and erroneous, often in defiance of every logical rule. Still, it has the advantage of exercising the higher powers of mind. The erroneous character of the classification is founded upon too narrow a basis of observation—a defect which wider experience alone can rectify.

III. **Later Childhood.**—Language so far has been an aid to conception. It has played the part of servant, there is now a tendency for it to enact the rôle of master. The mind is naturally prone to be satisfied with loose and vague notions about things, and this weakness is accentuated by loose use of language. The child is apt to repeat words, phrases and sentences without attaching any very definite meaning to them. Imperfect concepts produce loose language; the loose use of language reacts and produces hazy concepts. The child should not be allowed to use words except he attaches some clear and intelligible meaning to them. The meaning may not be full to begin with; it would be well if the idea corresponding with the term were accurate as far as it goes. It is really better at this stage that the child have a somewhat incomplete concept behind his word than that he should have no idea of its meaning at all. The essential at this stage is that the word should not be a mere empty sound, but that it should correspond with some definite notion or concept in the mind. Of course the fuller and more accurate that notion is the better.

The basis of full and accurate conception is full and accurate perception. The child should be led to detect similarities between things, and to group things into classes, according as they do or do not possess certain qualities. In this way, and in this way only, can the foundation of correct conceptive power be formed. Pestalozzi says that it is the chief business of education to pass from distinctly perceived individual notions to clear general notions. In all this it is essential that the learner should do the work. The faculty of independent thinking must be carefully trained. There is a tendency on the part of all of us to let some one else do

the thinking: we are only too ready to believe what some one else tells us and to act upon it. The concepts thus acquired are second or third hand, and not first hand as they should be. Our children must be trained to regulate, to master and to assimilate their impressions; too often they become the blind slaves of them.

IV. **Youth.**—From fourteen years and upwards the powers of abstraction become more marked. The study of sciences like botany and zoology, which so largely depend upon observation, abstraction and classification, may be now commenced.

School Lessons helpful in Training Conception.

Object Lessons.—The child should be taught to discriminate one object from other objects somewhat similar to it. To do this effectively the teacher should depend on the device of juxaposition. The child is thus led to detect similarities, and to abstract these similarities from the mass of conflicting detail. This abstraction implies class-making and the formation of concepts. The formation of concepts should not be the *first* aim of the object lesson; the first aim is the training of perception. But thinking cannot be carried far without concepts; hence some training in conception is necessary. "Object lessons which stop at percepts are waste labour in education." As the object lesson becomes more and more a training in conception, it glides into the lesson in elementary science.

Elementary Science.—Botany, zoology, mineralogy, chemistry are the sciences which admit of most classification, and are thus those which are most useful in training the conceptive faculty. The pupil should be made to work out his own classifications. Too often the teacher does this. The teacher would not dream of digesting bodily food for his pupil even if he could, yet he frequently endeavours to digest his mental food for him. "Eat the pupil's dinner for him if you will, but I beg of you to let him do his own thinking." (Baldwin.)

Composition.—Sentence-making is a great aid in training conception, provided the teacher sees that clear concepts do actually lie behind the spoken words. To this end, the child should be made to explain the meanings of the words which he employs. No word should be admitted to use unless some definite meaning is attached to it. The meaning will not be the full connotation of the word, it need not always be quite correct. The great desideratum is that some definite meaning be attached to the word in question. Subsequent experience will amplify and, if necessary, correct the first meaning.

Summary.

Definitions.

A Concept is "a re-presentation in our minds answering to a general name."

Conception is the mental process which results in a concept.

Stages in Conception.

1. Observation.
2. Comparison.
3. Abstraction.
4. Generalisation.

Causes of Indistinct Concepts.

1. Indistinct percepts.
2. Faulty or insufficient observation.
3. Imperfect abstraction.
4. Loose use of language.
5. Lapse of time.
6. Imperfections of memory.

Marks of Good Concepts.

1. Founded on concrete examples.
2. Founded on wide range of examples.
3. Definiteness.

Development of Conception.

1. *Infancy.*—There is little conception before speech.
2. *Early Childhood.*—The multiplicity of individual things makes classification necessary, a work in which language materially assists.
3. *Later Childhood.*—The loose use of language now becomes a serious factor in the production of incorrect and hazy concepts. Object lessons, science lessons and accurate use of language are the remedies.
4. *Youth.*—Powers of abstraction become well developed, and conception grows apace.

School Lessons useful in Training Conception.

1. Object lessons.
2. Science lessons.
3. Language lessons.

QUESTIONS.

1.—Explain the steps by which a general notion or concept is formed, and distinguish between distinct and indistinct concepts. How far does the choice of examples by a teacher assist the pupils in forming distinct and accurate concepts? (E.D.)

2.—Illustrate, by some lesson on natural science, Bain's statement that the discovery of likeness among things seemingly unlike is the relief from an intellectual burden. (L.U.)

3.—"Qui bene distinguit bene docet." Show this in detail, with reference to the teaching of some particular subject (L U.)

4.—Sketch the psychological process of forming general notions, giving precise explanation of the correlative terms concrete and abstract. Illustrate by considering the mode in which the first notions of the parts of speech may be conveyed. (L.U.)

5.—Explain and illustrate what is meant by calling concepts (*a*) obscure, (*b*) clear, (*c*) distinct; also discuss the means of training the powers of abstraction. (L.U.)

6.—Distinguish between the meanings of the terms abstract and concrete, and show the application of these terms (1) to parts of speech and (2) to arithmetic. Say what is the use of the distinction. (E.D.)

7.—What do you mean by abstraction? What faculties are concerned in the process? (E.D.)

8.—Distinguish between apprehension and comprehension, and between perception and conception, and show the bearings of this distinction on the work of the teacher. (E.D.)

9.—Explain and discriminate between comparison and contrast. Demonstrate their use in teaching, and show by precise examples in what subjects they are of special value. (E.D.)

10.—What is meant by a concept? Show by means of an example how you would seek to develop clear and accurate concepts in children's minds. (C.P.)

11.—Point out the distinction between mental images and general notions or concepts. Explain what is meant by saying that a vivid imagination may both help and retard general thinking. (C.P.)

12—Discuss the nature of concepts with reference to the psychological question at issue between nominalists and conceptualists. (V.U.)

CHAPTER XI.

JUDGMENT.

Examples of Propositions.

(*a*) The fire is hot.
(*b*) The dog is an animal.
(*c*) The whale is not a fish.
(*d*) Honesty is the best policy.

The above are examples of what the grammarian calls *Simple Sentences*, and what the logician calls *Propositions*.

Examination of Propositions.

We could all analyse these sentences according to grammatical rules: let us proceed to analyse them according to their meaning.

The fire	is	hot.
The dog	is	an animal.
The whale	is	not a fish.
Honesty,	is	the best policy.
something about which an assertion is made; called the **Subject.**	a connecting link; called the **Copula.**	something asserted about the subject under discussion; called the **Predicate.**

When we say *The Dog is an Animal*, we have in the mind two ideas, *dog* and *animal*, and we express an agreement between those two ideas. What is in the mind is called a *judgment;* the expression of a judgment in words is called a *proposition*.

A Proposition consists of:—	**A Judgment consists of:—**
1. Subject.	1. } Two ideas.
2. Predicate.	2. }
3. Copula.	3. Relation between them.

DEFINITIONS OF JUDGMENT.

1. **To judge is to assert an agreement or disagreement between two ideas.**

2. To judge is to discover the relationship between two ideas.

3. "Whenever we connect two representations with one another under the form of a statement we perform an act of judgment." (Sully.)

JUDGING AND JUDGMENT.

The term *Judging* should be used for the process; the term *Judgment* for the result.

Compare:—

Process.	*Result.*
Judging	Judgment
Imagination	Image
Conception	Concept
Perception	Percept
Sensation	Sensation

Popular use of the Term to Judge.

To Judge in popular language has several meanings the two chief are,—

(*a*) To come to a decision.

(*b*) To apply in a quick and automatic manner the results of past experience to new cases.

Examples of Judging.

1. Here are two lines A and B (Fig. 62). I look at them, examine them, and judge that B is a little shorter than A.
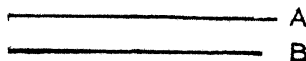
Fig. 62.

2. When I express the judgment: *Blackboards are useful things, I* have, as it were, divided all things into two classes—*Useful and Not-useful Things* (Fig. 63).

I have **compared** blackboards with *useful* and also with *not-useful things*, and have come to the **decision** that blackboards have more points in common with the class of *useful things* than with the class of *not-useful things.*

ANALYSIS OF AN ACT OF JUDGING.

From these two examples we can easily see that the process consists of two parts:—

1. **Comparison.**
2. **Decision.**

JUDGING IS A HIGHER PROCESS THAN PERCEPTION OR CONCEPTION.

In Perception we form percepts, which are "ideas" of single objects, and which for the purposes of comparison may be termed *single ideas.*

In Conception we form concepts, which are "ideas" of classes of things, and which when contrasted with percepts may be called *general ideas.*
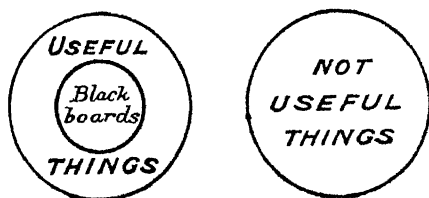
FIG. 63.

In Judging we take single ideas or general ideas, and discover the *relationship* which exists between them. In judging we act upon the materials brought by the processes of perception and conception.

JUDGING IS INVOLVED IN PERCEPTION AND CONCEPTION.

In perception we *compare* and contrast the thing under examination with other things and come to a *decision* regarding the thing under examination. But comparison and decision are the two essentials of judging. Hence even a lowly process like perception involves the essentials of a higher process like judging.

Similarly, a re-examination of the process of conception

(p. 154) reveals the fact that *comparison and decision* (*i.e.*, judging) are involved in it.

All mental processes, in fact, involve judging. As before stated (p. 22) the faculties are not separate entities; they are separable only by abstraction. The mind's capabilities may be studied separately, but they cannot act separately.

KINDS OF JUDGMENTS.

An examination of the judgments at the head of the chapter will show us that they are easily separable into two classes:—

I.	II.
The fire is hot.	The dog is an animal. The whale is not a fish. Honesty is the best policy.
A Judgment arrived at immediately.	*Judgments arrived at after more or less prolonged deliberation.*
Called Intuitive Judgments.	**Called Deliberative Judgments.**

This classification divides judgments on the basis of their *complexity*.

The mental attitude of the teacher in giving an explanation to a pupil is different from the mental attitude of the pupil who is receiving the explanation. The teacher is bringing forward his stores of information, his "things new" and his "things old," rejecting some ideas, retaining others. The pupil is receiving ideas and assimilating them to other ideas, he is piecing "the new" on to "the old." The teacher is using judgment in the rejection and retention of ideas, the pupil is using judgment in comparison and assimilation. The teacher's judgment is mainly *analytic*, whereas the pupil's is mainly *synthetic*.

Viewed then as regards the *progress* of the judging, judgments are of two kinds:—

1. **Analytic Judgments,** which are expressions of judgments previously formed.

2. **Synthetic Judgments,** which are judgments used for the first time, and are the results of new experiences.

A Synthetic Judgment adds to our knowledge; *an Analytic Judgment* tends to make our knowledge clearer. A teacher always has a better comprehension of a subject after he has taught it thoroughly than he had previously.

DEFINITIONS OF INTUITIVE JUDGMENTS.

1. "Intuitions are beliefs and judgments which present themselves spontaneously to the mind with irresistible evidence, but without the assistance of memory or reflection."

2. Intuitions are forms of knowing otherwise than by observation and reflection.

Classes of Intuitions.

1. *Sense Intuitions.*—Immediately perceived by the senses, *i.e.* percepts.
2. *Rational Intuitions.*—What is assumed as an apparently ultimate premise, *e.g.*, "Things which are equal to the same thing are equal to one another."
3. *Moral Intuitions.*—The recognition of the good, the beautiful, etc.

Some have held that intuitions are wholly independent of experience. Rational and moral intuitions are held by others to be the results of experience, either of the individual or of the race.

CAUSES OF INCORRECT JUDGMENTS.

1. **Lack of Clear Ideas.**—As we have seen, one of the essentials of judging is the comparison of ideas—*i.e.*, concepts, images, percepts. The more numerous the ideas, and the more clear and accurate those ideas, the more correct is the judgment likely to be. Children's judgments are often incorrect owing to the paucity and falsity of their ideas.

2. **Lack of Time to Examine Ideas.**—Two ideas are presented to the mind, and the mind, before it has had adequate time for deliberation and comparison, "jumps at

a conclusion." Subsequent examination perhaps shows that this conclusion is false. Hence the proverb: "*Second thoughts are best.*"

3. **Appropriating without due Examination the Words of other People.**—The lack of clear ideas and the lack of time to examine ideas lead many to appropriate the ideas of others, regardless whether those ideas are right or wrong. There is a primitive disposition of the human mind to believe the words of others. Kept within due bounds, this primitive disposition is one of the main-springs of faith, belief and obedience. How far the child is to be taught to accept the words of others, how far the child is to be taught to minutely criticise and examine the statements of others, is one of the unsolvable puzzles of education. Require a child to accept everything on faith and you make him a slave; "reason with a child about everything and you make him a monster."

4. **The Bias of Feeling.**—In endeavouring to arrive at a conclusion, we sometimes feel ourselves swayed by a wish to arrive at a conclusion of a certain kind, and the wished-for conclusion is arrived at, not by the process of cold reasoning, but by a triumph of the feeling over the intellect. Hence the proverb: "*The wish is father to the thought.*"

The bias of feeling is seen especially in theological and political judgments.

The bias of feeling is likely to affect the teacher in his estimation of a scholar. The strong-minded teacher seeks to eliminate this bias from his judgments; the weak teacher is more or less controlled by this bias, and "favouritism" results.

IMPORTANCE OF EDUCATING THE JUDGMENT.

As we have seen, judging enters into every department of our mental life, and in many mental operations it is a most important factor. No system of training can be complete which does not provide for the education of the judgment.

DEVELOPMENT AND TRAINING OF JUDGMENT.

Early Childhood.—From the beginning of life the child in a very rudimentary way exercises his judgment. The essentials of judging are, as we have seen, comparison and decision. The essential of any mental operation is differentiation (p. 22). But differentiation implies comparison and decision. Hence the earliest mental operations involve judgments. The child judges long before he speaks; his progress in speech is however a fair indication of his progress in judging. At first the child *thinks* "hot"; then he says "*ot*" (hot); next perhaps "*dink ot*" (drink hot); and lastly "*dis dink is ot*" (this drink is hot). Still we must not be led away too much by the general correspondence between *thought* and *language*, and imagine that because a child *says* wise things he therefore *thinks* them. Mere babbling is not thinking. Children sometimes startle us with their apparently well-reasoned judgments, but their "wise saws" are too often but parrot-like imitations of the remarks of their elders.

The kindergarten, by the numerous opportunities it gives for comparison and decision, affords the earliest well-regulated method of educating the judgment.

Later Childhood.—The outward and visible sign of a judgment is a sentence. Hence sentence-making becomes a valuable adjunct in the training of the judgment. The child should be compelled to give his answers, not in disjointed words, but in complete sentences, and should be rigorously cross-examined with the idea of discovering whether the corresponding judgments do lie behind the sentences which he has made.

SCHOOL SUBJECTS ESPECIALLY SERVICEABLE IN THE TRAINING OF THE JUDGMENT.

Writing and Drawing.—The child has to judge whether his effort is or is not like the copy. The young child in his *comparison* is apt to overlook slight differences between his exercise and the copy, and so comes to a wrong *decision*

regarding the merits of his effort. Hence the teacher should exaggerate on the blackboard the child's error, so that the difference may be perceived, the comparison properly made, and the correct decision come to.

Manual Training Exercises, such as paper folding, paper cutting, clay modelling, woodwork, etc., all help to develop the judgment.

Parsing and Analysis, if taught in their relation to sentence-making.

Arithmetic is a subject which if properly taught makes powerful appeals to the judgment. Some arithmetical exercises are admittedly and necessarily mechanical, but "problems" are among the finest school exercises for training the judging faculty.

Games require a nice appreciation of the exact amount of muscular effort necessary to accomplish a desired result, and hence are potent factors in the cultivation of the judgment.

SOME COMMON ERRORS IN TRAINING JUDGMENT.

1. **The Memory is crowded and the Judgment neglected.** The knowledge of some pupils is a heterogeneous mass, consisting of numberless details, ill-arranged or not arranged at all. It is easier to load the memory than to train the judgment, and the short and easy method is too frequently adopted. (See also p. 135.)

2. **Judgments are put before percepts and concepts.** The child is told the judgment by the teacher, and is then perhaps led to discover the percepts and concepts upon which that judgment is based. Too often the teaching finishes with the enunciation of the judgment. The child should be encouraged to make the percepts, to elaborate the concepts, and afterwards led on to form the judgments. "Teaching is the art of training the pupil to think." (Baldwin.). A generation ago the teacher did practically nothing for the child; now he does nearly everything. The

teacher of the past left his pupil to develop his own mental faculties. The teacher of to-day seems to do his best to relieve his pupil from the necessity of thinking at all. But there is surely a golden mean between doing nothing for a child and doing everything for him. It is for the teacher of the future to find it. The scholar of to-day would certainly be all the better for "a little wholesome neglect."

3. **Pupils are encouraged to blindly accept the statements of text-books.** Hasty judgments are arrived at, and there is no substratum of perception and conception in the pupil's mind upon which those judgments can rest. The love of truth and accuracy is not properly developed. Too much of the "education" given in our schools is text-book instruction, which cramps the normal activity of children and narrows their intellectual horizon.

Summary.

Judgment.

Definitions.

"*To Judge* is to assert an agreement or disagreement between two ideas."

A *Judgment* is the result of an act of judging.

Processes Involved in Judging.

1. Comparison.
2. Decision.

Kinds of Judgments.

1. *Intuitive*—arrived at immediately.
2. *Deliberative*—arrived at mediately.

Or,

1. *Analytic*—old judgments revived.
2. *Synthetic*—new judgments formed.

Causes of Incorrect Judgments.

1. Lack of clear ideas.
2. Lack of time to examine ideas.
3. Hasty appropriation of the judgments of others.
4. The bias of feeling.

Development of Judgment.

1. *Early Childhood.*—The earliest mental acts involve judgments. The rate of acquisition of language is some guide to the rate of development of the judgment.

2. *Later Childhood.*—Hence sentence-making becomes a valuable aid in training the judgment.

School Subjects Training the Judgment.

1. Writing and Drawing.
2. Grammar in relation to sentence-making.
3. Arithmetic.
4. Games.

Errors in Training the Judgment.

1. Memory crowded ; judgment neglected.
2. Judgments put before percepts and concepts.

QUESTIONS.

1.—Give a short account of an act of judgment, and show how it is possible for a teacher to expect too little, as well as too much, from a child's power of judging about things. (C.P.)

2.—Give a brief account of an act of judgment. To what extent is a child of six or eight to be encouraged to form his own judgments? (C.P.)

3.—What do you know of intuitive judgments?

4.—Discuss the causes of incorrect judgments.

5.—What are the chief errors made in judgment training?

6.—What relations exist between a judgment and a proposition?

CHAPTER XII.

REASONING.

Outlines of a Series of Lessons leading up to the Law: Matter expands with Heat.

First Method.

1. Teacher obtains an iron ball which will just pass through a ring. He heats the iron ball, and again places it on the ring. *It does not pass through.* **Inference: Heat has caused the iron ball to expand.**
2. Experiment is repeated with brass, copper, leaden and glass balls. **Inference: Brass, copper, lead and glass expand with heat.**
3. But iron, brass, copper, lead, glass are solids. **Further Inference: Solids expand with heat.**
4. Teacher takes a flask filled with water, and provided with a well-fitting cork, through which runs a narrow tube. The class notes the level of the water in the tube. The water is heated. *The water rises in the tube.* **Inference: Water expands with heat.**
5. The experiment is repeated with alcohol, milk, treacle, etc. **Inference: Alcohol, milk, treacle, etc., expand with heat.**
6. But alcohol, milk, treacle, etc., are liquids. **Further Inference: Liquids expand with heat.**
7. Teacher partly fills a bladder with air, ties up the opening, draws attention to the wrinkled surface, and places the bladder before the fire. *The wrinkles disappear, showing that the bladder is now full of air.* **Inference: Air expands with heat.**
8. The experiment is repeated with coal gas and carbonic acid gas. **Inference: Coal gas and carbonic acid gas expand with heat.**
9. But air, coal gas and carbonic acid gas are gases. **Further Inference: Gases expand with heat.**

10. But solids, liquids and gases are forms of matter. **Final Inference: Matter expands with heat.**

Second Method.

1. The teacher enunciates the principle: **Matter expands with heat.**
2. He argues solids are a form of matter; iron is a solid; therefore **Iron expands with heat.**
3. He then proceeds to work an experiment to prove his assertion.
4. He argues liquids are a form of matter; water is a liquid; therefore **Water expands with heat.**
5. He then proceeds to work an experiment to prove his assertion.
6. He deals with gases in a similar manner.

Chief Difference between the First and the Second Method.

There are many differences, as we shall see, between the two methods. At present we shall merely notice the *chief* difference.

In the *First Method* particulars (*i.e.*, single cases) were first dealt with, and from these particular cases general laws were inferred. This method of reasoning is known as **Induction.**

In the *Second Method* the general law was first enunciated, and particular cases were then shown to be examples of this general law. This method of reasoning is known as **Deduction.**

DEFINITIONS.

REASONING. Perceiving relations among judgments.

Reasoning is perceiving relations among judgments in much the same way as judging is perceiving relations among concepts (p. 163).

INDUCTION. (1) The process of establishing a general proposition based on the evidence of particular cases.

(2) **Induction "is an inference establishing a general proposition based on the evidence of particular cases."** (Mill.)

In the first definition Induction is viewed as a *process*, in the second as a *result*.

To infer is to pass from one judgment to the next judgment.

DEDUCTION is the process of following out a general proposition into its particular applications.

The term *elicit* is often used to denote both inductive and deductive reasoning; young teachers frequently use the term *deduce* when they mean to indicate the use of inductive processes.

COMPARISON OF THE FORMS OF THE TWO GREAT METHODS OF REASONING.

Induction.	**Deduction.**
Data.	*Data.*
Iron expands with heat. Brass expands with heat. Lead expands with heat. Glass expands with heat.	All solids expand with heat. Iron is a solid.
Inference.	*Inference.*
Solids expand with heat.	Iron expands with heat.

In Induction we pass from given instances to a general law. This general law includes cases outside our experience. We thus generalise beyond the limits of our experience. Care must be taken that the instances upon which the induction is based are sufficiently numerous. An induction is, as it were, a leap beyond the limits of our experience—a leap which we may take with confidence because we know that *Nature is uniform*.

In Deduction we reason by means of the *Syllogism*. A *Syllogism* is an "act of thought by which from two given propositions we proceed to a third proposition, the truth of which necessarily follows from the truth of these given propositions." (Jevons.)

The two propositions are called *Premises*. The first proposition is called the *Major Premise*, the second the *Minor Premise*.

The third proposition is called the *Conclusion.* So we can rewrite our deduction.

Syllogism.

Major Premise.—All solids expand with heat.
Minor Premise.—Iron is a solid.
Conclusion.—Iron expands with heat.

General Comparison of the Processes of Induction and Deduction.

Induction.	Deduction.
1. An *upward* movement of thought from particular instances to general truths.	1. A *downward* movement of thought from general truths to particular instances.
2. Leads to definition, or rule, or principle, or theory.	2. Leads to a more perfect comprehension of the general principle, rule, theory, etc.
3. Leads to new knowledge.	3. Does not lead to new knowledge.
4. Is the method of discovery.	4. Is the method of verification and explanation.

Comparison of Induction and Deduction in relation to Teaching.

Induction.	Deduction.
1. Is the method of *education.*	1. Is the method of *instruction.*
2. *Is slow.* All knowledge has to be acquired first hand by the observation of particular cases.	2. *Is quicker.* The child avails himself of knowledge others have acquired.
3. *Is a natural method.* The child begins with the consideration of individual cases and afterwards proceeds to the consideration of classes. The true order is (1) percepts, (2) concepts, (3) judgments.	3. *Is not a natural method.* Judgments are put before concepts, concepts before percepts, theories before facts.

4. *Is a sure method of education.* The general law is arrived at little by little. Its meaning is well grasped and it can then be accurately applied to new cases.	4. *Is not a sure method.* Many general laws are too difficult for children to understand when presented to them by this method. The children may have learnt the words but may not have grasped the ideas; hence there is faulty application to new cases.
5. *Is a method which fosters self-reliance in children.* By it they are led to depend on their own acts of perception, conception and judgment.	5. *Is a method which encourages dependence on others.*

OUTLINES OF A FIRST LESSON ON THE ADVERB.

1. **Examples.**—Have the following simple sentences written on the blackboard before the commencement of the lesson :—

   (*a*) The man walked slowly.
   (*b*) John rose early.
   (*c*) The girl often sees the horse.
   (*d*) He faithfully served an unkind master.
   (*e*) The king never smiled again; also
   (*f*) The man spoke loudly (softly, quickly, slowly, now, soon, then, again).

2. **Manipulation of Sentence** (*a*).

Let a child read sentence (*a*), tell what parts of speech "*the*," "*man*" and "*walked*" are and give reasons for answers Proceed to *slowly*. Elicit that it is not a verb, nor a noun nor an adjective.

3. **First Inference from Sentence** (*a*).

The word "slowly" is a new part of speech.

4. **Manipulation of Sentences** (*b*) to (*f*).

Deal with these sentences in a manner similar to manipulation of sentence (*a*). Underline on the blackboard the words which are new parts of speech.

5. **Inferences from the Sentences** (*a*) to (*f*).

The words slowly, early, often, faithfully, never, etc., are new parts of speech.

6. **Further examination of the new parts of speech to discover their functions in the Sentence.**

Ask which makes the better sense, "*man slowly*" or "*walked slowly*." Proceed with other sentences. Note the part of speech to which the new part of speech seems linked.

7. **Inference.**

Each of these new parts of speech is closely connected with a verb.

8. **Introduction of the term Adverb.**

Take the sentence: His house adjoins ours. Draw from class that "*adjoins*" means "*joins to*," and that consequently *ad* means *to*. Write *verb* on blackboard; ask what syllable must be prefixed to make a word meaning "to a verb."

An adverb is closely connected with a verb.

9. **Further examination of the connection between Adverbs and Verbs.**

Take the sentences in (*f*). Again pick out the adverbs and the verb with which they are connected. Ask if we have the same idea of the "speaking" in "*spoke loudly*" as in "*spoke softly*."

10. **Inference.** *Adverbs slightly change the meanings of Verbs.*

11. **Introduction of the term "modify."** The word "modify" hardly comes in a child's vocabulary, and had better be told to the class. Ask for sentences containing the word "modify."

12. **PRELIMINARY DEFINITION. An Adverb is a word which modifies a Verb.**

13. **Application of the Definition.**

(*a*) Let class supply sentences containing adverbs. In each sentence given, ask which word is considered an adverb, and why it is so considered.

(*b*) Ask class to supply suitable adverbs to sentences which you give.

14. *Conclusion.* Let class learn definition by reading it from the board, by transcribing it, and by repeating it from memory.

Note.—The definition of the adverb can be extended to its ordinary form in subsequent lessons, and adverbs can then be selected from suitable passages in the reading books

The student should write notes of lessons leading up to the preliminary definition: *An adverb is a word which tells how, when or where an action is done.*

Examination of the Method of this Lesson.

The lesson commences with the examination of *particular cases* (words in sentences), and leads up to the idea

of a *class* of words (adverbs) having certain functions in sentences. The definition arrived at admits the existence of a class of words which contains more members than those already examined, *i.e.*, the definition is an induction.

The Method of the Lesson from Pars. 1 to 12 inclusive is Inductive.

But after the induction there was a further stage, in which the definition (general rule or induction) was taken, and particular cases were shown to come under this definition.

The Method of the Lesson in Par. 13 is Deductive.

Hence the lesson, viewed as a whole, is both inductive and deductive. The method might be called the *Inductive-Deductive Method.* Jevons calls it the *Complete Method,* while Mill denominates it the *Deductive Method.* The student must be careful to distinguish *Deduction* from what Mill calls the Deductive Method.

Perhaps the following may make this clear:—

Reasons that the Complete or Deductive Method should be followed whenever possible.

1. *True Education is a training of the whole of a child's faculty.* The complete method appeals to the whole child. It is often as advantageous to argue from "generals" to "particulars" as from "particulars" to "generals." Hence both methods should be used.

2. *The Complete Method appeals to the activity of the child.* It shows him how to collect his facts, how to examine them, what kind of inferences to make from them. Children taught by this method endeavour to tackle diffi-

culties; children taught under other methods are liable to succumb to difficulties. They excuse themselves from the effort of solution on the grounds that they have had "nothing like it before"; they expect to be told how to do everything; they are not trained to find out anything. Spencer, a great advocate of the complete method, says: "Children should be told as little as possible, and induced to discover as much as possible." Any method which pours knowledge into children, and expects them to pour it out again, is a poor method.

ANALOGY.

A teacher puts some small stones, sand and fine earth into a strong glass bowl partly filled with water. He stirs up the mixture, and on ceasing to stir gets the class to notice: that the stones are deposited while the water is moving rapidly, that the sand is next deposited as the water slows down, and that the fine earth is deposited when the water is still. He shows that conglomerate is largely composed of stones, that sandstone is composed of sand, and that shale is hardened mud, and then leads the class to reason that conglomerate is evidence of the former existence of rapidly running water, that sandstone points to slowly moving water, and shale to still water.

The reasoning in the above example is different from either Inductive or Deductive reasoning. Certain similarities have been discovered between the sandstone and the sand, and what is true of the sand is believed to be true of the sandstone. If the points of resemblance are few, the reasoning might be false; if the points of resemblance are many, the reasoning is probably true. The certainty of the process depends on the extent and number of the resemblances.

This kind of reasoning is called **Reasoning by Analogy**, and is thus described by Mill: "**Two things resemble one another in one or more respects; a certain proposition is true of the one; therefore it is true of the other.**"

DEFINITION.

The definition (general rule or law) plays an important part in reasoning.

When we define a word we seek to determine its common qualities or marks. Logicians call this the *connotation* of the word. The connotation is practically what is called the meaning of the word. Three terms are involved in definition, the meaning of which must be thoroughly grasped before attempting to frame definitions. They are as follows:—

Genus.—That part of the definition which is common to the term defined, and to the other terms with which it has to be compared.

Species.—This is the term to be defined.

Differentia.—This is the portion which distinguishes the *Species* from the rest of the *Genus.*

A definition must show in what respects the species is like the genus, and in what respects the species is unlike the genus. This is expressed by saying the definition should be *per Genus et Differentias.* The following examples will make this clear:—

Species.	*Genus.*	*Differentia.*
A house	is a building	to dwell in.
A church	is a building	to worship in.
A barn	is a building	to store grain in.
A school	is a building	to teach in.
A factory	is a building	to make goods in.
A bank	is a building	to put money in.
A theatre	is a building	to see plays in.

Rules for Definitions.

These are thus laid down by our best authorities:—

1. A definition must state the attributes of the thing defined, *i.e.*, it must be *per genus et differentias;* it must denote the species, the whole species, and nothing but the species.

2. A definition must not contain the name defined.

3. A definition should not be expressed in obscure, figurative or ambiguous language.

4. A definition should not be negative where it can be positive.

Summary.

Reasoning is perceiving relations among judgments. The chief forms of reasoning are: Induction and Deduction.

Induction.—The process of establishing a general proposition based on the evidence of particular cases.

Deduction.—The process of following out a general proposition into its particular applications.

A deduction is expressed in a syllogism.

Induction is superior to Deduction from a Teacher's point of view, because:—

1. It *educates* the child.
2. It is the natural method.
3. It is sure, although slow.
4. It fosters independence of thought.

The Complete Method (or the Deductive Method) comprises:—

1. Induction,
2. Deduction,

and should be followed wherever possible.

Analogy. "Two things resemble each other in one or more respects; a certain proposition is true of the one; therefore it is true of the other."

A Definition unfolds the connotation (*i.e.*, the meaning) of a term.

A Definition should—

1. State the whole of the attributes of the thing defined.
2. Proceed *per genus et differentias.*
3. Not contain the name defined.
4. Not be negative where it can be affirmative.

QUESTIONS.

1.—What methods would you adopt for the more effective training of the reasoning power at school? Show how you would vary your methods according to the age of the pupils. (L.U.)

2.—Show how the inductive method of reasoning may be employed in lessons on familiar natural phenomena, *e.g.*, the seasons, snow, dew. (L.U.)

3.—"Children should be *told* as little as possible and induced to *discover* as much as possible." How would you carry out this principle in the teaching of chemistry? (L.U.)

4.—Distinguish between inductive and deductive reasoning, and illustrate the place of each in school work. (E.D.)

5.—Explain the process of reasoning by analogy. In teaching by it, what subjects would you use? Give your reasons. (E.D.)

6.—What operations of the mind correspond with the three parts of the syllogism? (E.D.)

7.—Distinguish between analogy and induction, hypothesis and theory. (E.D.)

8.—Distinguish between sensation, perception and reasoning, and define the place of each in the process of education. (E.D.)

9.—Which is the more important factor in school education—learning or thinking? Describe the difference, and point out by what lessons the power of reflection and understanding may be best developed. (E.D.)

10.—Discuss fully the following statement: "General truths, to be of due and permanent use, must be earned." (E.D.)

11.—Give examples of the general rules according to which the natural order of teaching proceeds from the simple to the complex and from the particular to the general. (L.U.)

12.—What do you consider the distinctive disciplinary value of (*a*) mathematics, (*b*) classics, (*c*) physical science? Show how, in the teaching of these subjects, their distinctive disciplinary value is often missed. (L.U.)

13.—"In each branch of instruction we ought to proceed from the empirical to the rational." Discuss this. (L.U.)

14.—"Through facts to principles." Explain this. (L.U.)

15.—What are the more common defects in children's reasoning about the causes of things? How would you set about improving their manner of generalising about causes? (C.P.)

16.—What is meant by a perfect definition, and what processes of thought are involved in forming one? Give examples of good and imperfect definitions, and assign your reasons. How far is it advisable, if at all, to require definitions to be learned by heart? (C.P.)

17.—Distinguish between logical analysis and grammatical analysis. Which of the two exercises is, in your judgment, more useful as a mental discipline for young learners, and which should be taught first? State your reasons. (C.U.)

18.—In what does training to reason consist? Compare the reasoning powers of children at the ages of five, ten, fifteen. (C.U.)

19.—How far is it possible to classify the intellectual differences which mark off individual children one from another? Discuss the question with especial reference to one of the following: differences of memory; differences of reasoning power. (C.U.)

20.—Distinguish between induction and deduction. Contrast scientific induction with empirical generalisation, and explain any one method of scientific induction. Illustrate by reference to school-work. (V.U.)

21.—What does the logician understand by the definition of a term or "notion")? Give the rules of logical definition, and discuss their value to the teacher. (C.U.)

22.—What is meant by the "inductive method" in teaching, and to what extent is it analogous to the process of scientific discovery? (C.U.)

CHAPTER XIII.

APPERCEPTION.

"Eyes and No Eyes."

A child who has not learnt any physiology and who has not previously looked through a microscope, looks at a drop of blood under the microscope. He probably says that he sees *nothing*.

Another child who has, we will suppose, studied botanical sections under the microscope, looks at the same drop of blood and says that he sees *some small round bodies*.

A third child who has learned a little physiology looks through the microscope, recognises the small round bodies as corpuscles, notes that the majority are reddish, looks for and perhaps finds a white corpuscle, and comes to the conclusion that it is *a drop of blood* that he sees.

In the three instances everything is the same *except the children*. The differences in the results of the acts of observation must be due to the differences in the minds of the children. The reason the third child saw more than the other two was that he was fitted by previous training to see more. In order that we may see a thing properly it is not sufficient that rays of light should come from the object to the eye, and nerve vibrations travel along the optic nerve to the brain, the mind must be in a position to interpret, to understand those vibrations. To sensations coming from without, the mind adds imagination (*i.e.*, image-making) working from within. This combination of action of object on mind and the reaction of mind on object is known as *Apperception*.

The Argument extended to some of the other Senses.

Words do not "convey" ideas. Words simply convey a few noises into the mind. The meaning of the words has to be supplied by the mind receiving the impressions.

If I am blindfolded and feel a piece of cloth, I am able to perceive little more than that it is (we will suppose) smooth and thick. The blind man will be able to discover much more than this. Not only will he be able to tell that it is smooth and thick, but he will be able to tell the texture, the material of which it is made, and sometimes even the colour of the cloth.

The stimuli to the touch were the same in each case, but the blind man's consciousness reacted against more stimuli than my consciousness. This reacting activity of consciousness is the characteristic of apperception.

Definitions of Apperception.

1. Apperception is that form of mental activity under which percepts are brought into relation with our previous intellectual and emotional states and assimilated with them.

2. The general name for the process of mentally "taking in" whatever form that process may take.

3. The process of taking anything into the mind and giving it position and meaning in the mind.

4. "The bringing to bear what has been retained of past experiences in such a way as to interpret, to give weight to the new experience."

The speciality of apperception is the relating activity of consciousness. It may be viewed as psychic reaction, interpretation, elaboration, thought, all taken together.

Apperception is to the mind what digestion is to the body. The body reacts on food and produces tissue. The mind reacts on percepts and produces knowledge.

Conditions of Apperception.

1. *The External Factor.*—A stimulus from the outside must enter the mind. Thus in the example at the beginning

of the chapter, stimuli from the drop of blood entered the eye and affected the nervous system and the mind.

2. *The Internal Factors.*

(*a*) There must be some response to these stimuli in the form of *Attention.*

(*b*) There must be a stock of "*apperceiving ideas*"—bits of kindred information which serve to interpret or explain the stimuli.

The Apperceiving Group.—The group of ideas already in the mind which absorbs an idea just presented to the mind is called the apperceiving group. The idea just presented is, when acted upon by the apperceiving group, said to be *apperceived.* "The apperceiving conceptions usually stand like armed soldiers within the strongholds of consciousness, ready to pounce upon everything which shows itself within the portals of the senses, in order to overcome it and make it serviceable to themselves." (Lazarus.)

Causes of Defective Apperception.

1. *Lack of Attention.*—As we have seen (p. 22), attention is one of the essentials of intellectual operations.

2. *Lack or Insufficiency of Apperceiving Ideas.*—When a lesson is "too hard" for a child, the child is unable to call up the group of apperceiving ideas suitable for the comprehension of the idea just presented.

When "words go in at one ear and out of the other," there is a lack of attention, or of the apperceiving group, or of both.

Defective Apperception may be *false* or may be *incomplete.*

It is *false* when the apperceiving group suitable for the explanation of the idea is not called up. Some other apperceiving group is called up and a false interpretation obtained.

Apperception is *incomplete* when only a part of the suitable apperceiving group is recalled. The ideas of most children are one-sided largely owing to the small range of experience. The teacher should strive for vivid, clear ideas,

Completeness of ideas is of secondary importance. Time, "the great innovator," will remedy this defect.

The Importance of the Consideration of Apperception.

Nicole says that it is not the teacher nor outside instruction which causes things to be comprehended. The teacher exposes "things" to the interior light of the mind. If this light is absent the "thing" is not understood, just as when light is absent it is impossible to see or understand a picture.

The development of the mind from within is consequently more important than the instruction of the mind from without. Apperception shows that it is absolutely essential to stir the mind of the child. It is the child's own activity which will strengthen and develop his mind. "The condition of the learner should not be one of passive reception, but of earnest self-exertion."

APPLICATION OF APPERCEPTION TO TEACHING.

Brief reflection will show the thoughtful reader that the theory of apperception points out that:—

1. The minds of the pupils must be *prepared* for the matter to be taught.

2. The matter to be taught must be *presented* in a methodical manner.

In other words, the thoughtful teacher, before giving a lesson, will ask himself two questions:—

1. What do the children already know which is at all kindred to the subject of the lesson?

2. How shall I "dovetail" the new knowledge into the old?

Preparation, *i.e.*, the calling up of the *Apperceiving Group.*

1. The teacher must see that the matter to be taught is in some way connected with the previous knowledge of the class. He must not assume that the children know more

about the subject than they really do. "The habit of assuming that children know more than they do is the cancer disease of our schools."

2. The apperceiving group must be marshalled in such a way as to excite expectation, stimulate interest, and generally to prepare for the new knowledge to be taught.

3. The preparation must not be too elaborate; it is but a means to an end. This is a common mistake with young teachers, who frequently allow their "*Introduction*" to a lesson to monopolise the greater part of the lesson.

Presentation, *i.e.*, the absorption of the new ideas into the apperceiving group.

1. The matter to be taught must be presented, not in the mass, but in small logically arranged sections.

2. The subject should be unfolded step by step. Each new idea taught should be a step towards one end—the development of the whole subject.

3. The teacher should, at the end of each step, require the pupil to reproduce in his own words the details of that step, and at the end of the lesson he should require a summary of the whole lesson given in a pupil's own words.

"The best test that a person has understood a thing is, that he can reproduce it in his own way with his own words."

English teachers depend too much upon rapid vivacious questioning in their examination. This method does not train the power of *connected* thinking.

The German method, under which the child is required to give in his own words an account of the whole lesson, has much to recommend it. "The smooth connected presentation by the child is better than the discourse interrupted a hundred times by the teacher."

Summary.

Apperception.

Definitions.—*Apperception* is that form of mental activity under which percepts are brought into relation with our previous states and assimilated with them. *The Apperceiving Group* is that set of ideas which assimilates the idea presented to the mind.

Conditions of Apperception.

1. *External Factor*—stimulus giving rise to percept, idea, etc.
2. *Internal Factors*—(*a*) attention, (*b*) the apperceiving group.

Apperception may be defective because it is *false* or *incomplete*.

Defective Apperception caused by:—

1. Lack of attention.
2. Lack of apperceiving ideas.

The Application of the Theory of Apperception to Teaching.

Sound teaching may be divided into two stages:—

1. *The Stage of Preparation*, in which the appropriate apperceiving group is evoked.
2. *The Stage of Presentation*, in which the new ideas are absorbed by the apperceiving group.

QUESTIONS.

1.—Briefly describe the mode of activity of a child's mind in assimilating some oral lesson—say on history. How would you distinguish mere verbal knowledge from a real understanding of such a lesson? (C.P.)

2.—It is said that in teaching young children "presentation" should precede "representation." Explain this.

3.—Distinguish between instruction and education.

4.—What points should be borne in mind in presenting comparatively new matter to a class?

5.—"Learn something thoroughly and refer everything else to it." Discuss the value of this as a general rule for methodical teaching. (E.D.)

6.—What do you understand by method? In what sense (if any) is the method of teaching one and the same for each subject, and in what sense is it different? (E.D.)

7.—Briefly unfold and estimate the following distinctions: (*a*) lecturing and teaching, (*b*) trained and untrained sight, (*c*) memory work and mind work. (E.D.)

8.—Compare the process of assimilation in following a historical narrative and in finding the solution of a mathematical problem. (L.U.)

9.—Herbart lays emphasis on the need of cultivating in the pupil "a large circle of thought, closely connected in all its parts." Explain this. (L.U.)

10.—What is meant by apperception? Show how it is related to attention, and explain the practical conclusions to be drawn from considering the relation. (V.U.)

11.—What do you understand by the assimilation of knowledge? How do you distinguish ill-assimilated from well-assimilated knowledge? Illustrate from school work. (C.U.)

12.—"Homines dum docent discunt." Examine this from the point of view of modern psychology. (C.U.)

13.—What is meant by apperception? How is it related to perception? (V.U.)

14.—Discuss the educational importance of the distinction drawn by certain psychologists between perception and apperception. (C.U.)

15.—Analyse perception, distinguishing it from sensation and from judgment. What is apperception, and how is it related to perception? Show how good observation depends on apperception. (V.U.)

CHAPTER XIV.

AN ATTEMPT TO EXAMINE THE PSYCHOLOGICAL BASIS OF THE KINDERGARTEN SYSTEM.

We will endeavour to ascertain what are the more marked characteristics of early childhood, and then endeavour to ascertain how far the kindergarten method can be made the means of developing those characteristics of the young child which are good, and of checking those that are bad.

THE MOST MARKED CHARACTERISTICS OF EARLY CHILDHOOD ARE:—

1. **Spontaneous Activity.** This is a noticeable feature in the young of all animals. The playfulness of the kitten, the freshness of the young horse, the delight of the young hound when released from the chain, will serve as illustrations. Bain attaches great importance to spontaneity, which he defines as "the fact that the active organs may pass into movement apart from the stimulus of sensation." In young children there would seem to be a superabundance of nervous energy which must be "fired off" somehow, always to the delight of the child, and often to the discomfort of his elders. One outlet of the child's spontaneous activity is found in the exercise of the senses, and our first knowledge of things is gained through the exercise of this spontaneous activity.

2. **Dislike of continued application.** Restlessness of body has as its concomitant restlessness of mind. It is as impossible for a child to fix his mind upon one thing for any

length of time as it is for him to keep his body in one position for a prolonged period.

3. **Delight in examining things, especially in handling them.** The child three months old, after his attention has been riveted by the bright light, puts out his hand to try to grasp it. Sight alone is not deemed sufficient—a reference must be made to *Touch*. The crying of children for things they see, and which they must not have (*e.g.*, ornaments on the mantel-shelf), illustrates the natural desire of the child to examine things by the sense of touch.

4. **The superior attractiveness of the colour over the form element in claiming the attention.** Bright-coloured things have a peculiar fascination for children. The child prefers his gaudily-coloured picture-book to the etchings of a first-class artist.

The superiority of the colour over the form element is further shown in the fact that the names red, blue, etc., are learned before the names square, oblong, etc.

5. **Marked Imitative Powers.** In baby life the response to the mother's smile, and the attempts to imitate articulate language, are illustrations of this primordial faculty. The playing at "mothers and fathers," "keeping shop," "keeping school," are a few among the many later manifestations of the same thing.

6. **Marked Imaginative Powers.** Children are full of fancy. Their "make-believe" games are products of their spontaneous activity and of their imitative and imaginative powers. Untrammelled as it is by experience, the child's imagination often seems to run riot, and some educationalists have gone so far as to say that it ought to be restrained rather than cultivated.

7. **Some evidences of Sympathy.** The rudiments of sympathy are probably instinctive. Very young children answer smile with smile and look sorry when mother or nurse appears so. This instinctive sympathy needs experience and exercise for its development. The capability of entering into the *sorrows* of others is first acquired—hence

many nursery tales depend upon the gratification of the impulse of pity. The young child does not readily enter into another's *pleasures*: the egoistic impulses are as yet too strong.

8. **Strong powers of Verbal Memory.** The ease with which the young child gains a fair mastery of the intricacies of his mother tongue is strong evidence of remarkable retentive powers.

9. **Weakness of powers of fine discrimination.** Even the very young child possesses some powers of discrimination (p. 22), but this discriminative power is limited to the detection of large and striking differences.

10. **Weakness of the higher mental powers: Abstraction, Judgment and Reasoning.** These, as we have seen, are the results of mental development.

11. **Weakness or absence of moral impulses.** The moral impulses are, as we shall see, largely the result of education in its widest sense.

Finally, it should be noted that one characteristic is mutually dependent on the others. Just as in the body of the normal child one part grows in proportion to the growth of other parts, so one faculty of the mind may be said to develop in proportion to the other faculties.

HOW FAR THE KINDERGARTEN SYSTEM RECOGNISES THESE CHARACTERISTICS OF CHILDREN.

Any good system of education makes use of the powers of the child according to the order and strength of their development, and endeavours to direct those powers into the right channels. We will now examine the kindergarten system and endeavour to see how far it conforms to these requirements.

1. **It starts with the recognition of the spontaneous activity of the child.** Fröbel recognised that "the first start in knowledge is made through spontaneous and overflowing activity." The child was to him an acting and creating being, not a learning and knowing one. The

systematic manner in which the kindergarten system aims at developing the higher forms of knowledge from the playful activity of the child is one of its most valuable features. The brick-building, plate-laying, bead-threading, singing, acting, marching are all so many devices for diverting the child's activity into educational channels.

2. **It recognises the fact that the child is incapable of long-continued application.** The lessons are *short*, and each short lesson is divided into parts which call for the exercise of different capabilities. But the lessons all centre round *one idea*, and thus habits of attention to one thing are fostered. The brick-building, stick-laying, etc., compel close and comparatively long *active* attention—a consummation which no mere passive contemplation could achieve.

3. **It recognises the fact that the child delights to examine, and especially to handle things.** The "gifts" are not intended to be merely *shown* to the child—they are to be *touched* and *handled* by him; indeed it was Fröbel's idea that the "gifts" should be *given* to the child when the series of lessons dealing with them had been completed. The observation of the "gifts" trains the visual sense, the handling of the "gifts" trains the tactual and muscular senses, the conversation, recitation and singing train the sense of hearing. The perception of form is thus properly acquired through the exercise of the senses of touch and sight used conjointly.

4. **It recognises the attractiveness of colour for young children** by commencing with the *coloured* balls in the first gift.

5. **It employs the imitative powers of the child** by requiring him to build up the various forms, etc., in imitation of the teacher.

6. **It employs the imaginative powers** in getting the children to imagine that the forms built are chairs, seats, churches, etc. Some of the forms in the paper-folding exercises do certainly require considerable imagination for their identification.

The story-telling also gives considerable exercise to the imaginative powers.

7. **It endeavours to cultivate Sympathy** by the recital of suitable stories, and also by the example shown by the teacher in his treatment of animals that are the subjects of the lessons.

8. **It cultivates the powers of Memory** in the learning of recitations, songs, etc., and by the frequent appeals which are made to subjects connected with previous lessons.

9. **It recognises the weak discriminative powers of the child** by placing at first *large* differences before him. Thus after the first gift (balls of different colours), Fröbel introduces the *cube* of the second gift and contrasts them somewhat as follows:—

Ball.	*Cube.*
One surface.	Several surfaces.
No corners.	Several corners.
No edge.	Several edges.

Then when these *great* differences have been observed, he introduces the cylinder as intermediate in form, and compares and contrasts the ball and cylinder on the one hand, and the cylinder and cube on the other. The differences between ball and cylinder are not so striking as the differences between ball and cube, and hence are not brought forward for observation until the greater differences have been mastered.

10. **It recognises the weakness of the higher mental faculties,** and consequently makes little demands upon them, preferring to build up a solid substructure of sense-percepts upon which higher intellectual processes may be founded. It recognises that the child's mind is not prone to division and abstraction, but is rather adapted for observing things as *wholes*, hence attention is drawn to the *whole Cube* in Gift II., before the introduction of its parts in Gift III.

11. **It endeavours to train the moral sense** in many ways, *e.g.*, by awakening sympathy and by inculcating the

necessity for the quiet observance of law and order in all lessons.

The kindergarten system recognises the mind as a whole, not as a mere accumulation of parts. It seeks to cultivate not only the thinking powers of the mind, but also those of feeling and volition. "It seeks to develop the inner man through the assimilation of the outer world." It does not try to "plaster" the external on to the internal; it endeavours to make the external internal. It aims at a true development of mind and not at the mere accumulation of knowledge.

Summary.

The Child possesses:—	The Kindergarten System recognises:—
1. Spontaneous activity.	1. That this spontaneous activity must be diverted into educational channels.
2. Dislike of continued application.	2. That lessons should be short.
3. Delight in handling things.	3. That the child should handle the "gifts."
4. A liking for colours rather than for form.	4. That the commencement should be made with coloured objects.
5. Marked imitative powers.	5. That the child should imitate the teacher.
6. Marked imaginative powers.	6. That the imagination should be employed in naming forms made in paper folding, etc.
7. Some sympathy.	7. That sympathy should be cultivated chiefly through pity.
8. Strong verbal memory.	8. That the memory may be usefully employed in learning songs, etc.
9 Weak discriminative power.	9. That the differences presented to the child's notice should be large.
10. Weak powers of judgment and reasoning.	10. That it is inadvisable to endeavour to evoke these too much.
11. Weak moral sense.	11. That the moral sense may be trained through sympathy and regard for law and order, etc.

QUESTIONS.

1.—Name the more marked characteristics of early childhood. Classify them into those that are useful and those that are not useful in advancing true mental development.

2.—In what ways does the kindergarten system utilise the activity of the child?

3.—Examine the psychological basis of the kindergarten system. (L.U.)

4.—How does the order of mental growth determine the order of instruction? (V.U.)

CHAPTER XV.

THE FEELINGS.

DIVISIONS OF FEELING.

There are two great classes of feeling known as **Sensations** and **Emotions.** The former have already been dealt with. We are principally concerned with the latter here. But it will be just as well to emphasise the difference between the two classes.

I knock my hand against the table. I have a feeling of physical pain—a sensation. A person does an injury to my reputation. I have a feeling of anger—an emotion. The one arose in direct response to an external stimulation (the knock) ; it was immediately presentative; it brought into consciousness a state of the body. The other denoted a mental agitation; it was caused by no material substance like the table, but arose in idea and brought into consciousness a state of the mind; it was representation.

Again, an infant would be conscious of the pain of the blow, although it would be indifferent to slander. In other words the sensation is a primary form of consciousness, whereas the emotion is secondary and derived. The same fact teaches us that the sensation is simple or primitive, whilst the emotion is complex. Other elements are wanting, a number of minor feelings are required, and these have to be fused, *e.g.*, the feeling of injustice, of cruelty, etc.

I could localise the sensation on my finger. Both its locality and character are definite, but my anger in the same sense is neither definite nor localised.

We thus see that—

Feeling as Sensation is the increase (or decrease) of mind activity produced by Organic disturbance on the surface of the body whether external or internal,

Whilst

Feeling as Emotion arises within the body and is the product of all concepts present to consciousness at the time.

FEELING DEFINED.

We may experience fear or joy, anger or sympathy, love or hatred. Some of these conditions are pleasurable, some painful. Hence **Feeling comprehends pleasures and pains.** Mr. Bain adds "and states of excitement that are neither." As an instance he gives surprise, and points out that though sôme surprises are pleasurable or painful, some are neither. But it is to be questioned whether any feeling is entirely devoid of one or the other element. Our feelings are also very varied. They may be mere **instincts,** as in the case of sucking or crying in the child. With feeling as **sensation** we are already familiar. From these facts we learn that **Feelings are agitations or impulses of the mind.**

Sometimes we speak of our general state of feeling, and this is the sum total of a large number of obscure concepts, each of which individually is too weak to rise above the threshold of consciousness. If these contributing elements change, the state of general feeling changes. But these elements are always changing as our experience grows, hence feeling tends to become very complex. Sometimes the elementary feelings conflict among themselves, and this adds further to the complexity of feeling. We note also that strong feelings are accompanied by immediate changes in the bodily organs, and that these changes act on the mind and so produce fresh changes of feeling. These bodily changes are due to an overflow of nervous energy into the sympathetic system of nerves.

We thus see that two facts are necessary for the pro-

duction of an emotion: (1) The feeling must acquire a certain degree of intensity and produce certain physical results in the bodily organs; (2) These changes themselves must be felt.

CHILDREN'S FEELINGS.

1. **Selfish and Rudimentary.** A child's early feelings are naturally selfish and bound up with his bodily wants and the lower forms of sensation. The hungry child is indifferent to everything until his wants are satisfied. The chief part of his experience of life is composed of sensuous feelings. At present he is a young animal, and although traces of the more universal and elementary emotions like fear, astonishment, anger, grief, joy, curiosity and jealousy are early manifested, still only traces of these are at first present, and these are generally closely connected with the more primitive sensations. In fact many of them are more or less instinctive, for a child will show signs of fear before it can know anything to be afraid of. The maternal care soon begins to develop some degree of affection, but even that is not discriminative, for Madame Guizot points out that a child will often lavish the same affection on a doll as on her mother. This seems to show also that there is no proportion between the feeling itself and its manifestation. The higher feelings are almost entirely wanting, and are products of very slow growth. The æsthetic sentiment at first shows itself merely on the sensuous side in the appreciation of the bright light or the pretty colour.

2. **Non-representative.** The sensibility of the child is limited by his intelligence, which is naturally very small. The concrete only appeals to him, for his memory is yet weak. He can neither recall the past nor conceive the future. Remove the object and you remove most of the feeling, for he is not yet mentally strong enough to retain it in idea, *i.e.*, his feelings are non-representative; they are only aroused by *present* objects. He may be afraid of an animal, object or person when present; he is not yet so

affected when it is absent. His weak representative power saves him the pain of fear, although at the same time it deprives him of the pleasures of imagination.

3. **Intense and Violent.** This characteristic of childish feeling is common experience. It is easily understood. The will is weak, hence self-control is lacking. The feeble intellect allows of no reflection. His moral sense is but little developed, and unequal to the task imposed on it. It is worthy of note that this characteristic is associated with pains rather than pleasures, and this is probably due to the more primitive nature of the emotions concerned; *e.g.*, fear, anger. The child is a perfect slave to the feeling whilst it lasts, especially in its more intense forms.

4. **Fugitive and Brief.** This is a compensating arrangement for their violence—they rarely last long. The non-representative element causes the feeling to quickly arise, but like the seeds that fell on stony ground they have no depth of root. The feelings in a sense are superficial. There is no nursing of wrath to keep it warm. The habit of feeling is not yet fixed, so that the emotion is transient. The introduction of a new presentative element will often displace the painful feeling.

DEVELOPMENT OF FEELING.

Development follows along the same lines as in the intellect, and this is easy to understand when we remember that *we are only moved by a thing in proportion to our knowledge of it.* Growth is from the simple to the complex, and is strengthened by exercise and experience. Speaking generally our first feelings are mere appetites and bodily sensations. We then find those emotions developing which are concerned with the individual himself—the egoistic. Those feelings which relate to others —the social—are later in their development, whilst the higher emotions or abstract sentiments are the last to appear.

1. **Sensuous Feelings.** The early days of childhood are chiefly concerned vith nutrition and growth, hence early

mental life consists chiefly of sense feelings. These may be pleasurable or painful, and the child distinguishes the two states from the first. Hunger or thirst is announced by crying, which in this case proclaims a feeling of discomfort, which arises from the need of nourishment. Preyer asserts that even at a very early period the child's voice is different when he cries from hunger and when he cries from pain. We thus see that differences of bodily feeling assert themselves from the first, although these differences are as yet rudimentary. But sense impressions arise in great abundance, and so gradually lead to definite sensations, and to the higher feelings associated with these within the province of the special senses.

2. **Emotions.** Every feeling is accompanied by a diffused current of nervous activity which tends to produce movement or expression. These nerve currents spread to the centres and flow outwards along the nerve tracks to the external parts of the body, and produce certain changes as seen in anger and fear. Such emotions are primitive, and have *instinctive* germs as an element. The cause or stimulus of the feeling may be the same, but the result will vary with the disposition of the child. The *hereditary* element is revealed when the child smiles at his mother's face. Myriads of children have smiled at the faces of myriads of mothers; the association has thus been set up and transmitted in the germ.

The feeling is strengthened by its bodily manifestations. These in their turn give rise to feelings which intensify the original feeling. But there is a limit to this. The climax having been reached the feeling begins to subside. Some one has said that all the feelings in their highly emotional form run, as it were, a sort of physiological career.

But the feeling while it lasts may be modified. The nervous disturbance may extend to the thoughts, as when we are "moved by fear," and it may produce such a strong modification of the original feeling that we may lose ourselves in it.

Memory and Imagination are factors in the development of feeling. If the like feelings have been previously experienced, traces of these may mingle with the present feeling, either through their persistence in the mind or through their revival under the influence of the present feeling. We then have what is known as *Ideal Feeling*.

But this stage of feeling demands a fair amount of representative power and some experience before it can be imagined and recalled. *Exercise* is very necessary, for every time any particular feeling is aroused it leaves behind it some traces. No doubt many of these fade with time, but there is always a residuum sufficient for the purpose. It has already been pointed out that children's feelings are fugitive and brief, but an important result of repetition is the formation of *Habits of Feeling*, or speaking more strictly, tendencies to feel. Our higher feelings are naturally of a slow growth, and in a certain sense nothing but habits. We do not become benevolent or polite in a day, and our particular interests and hobbies are especially illustrative of the influence of habit on feeling.

Temperament is an important factor. Physiological differences in the structure and mode of working of the brain give rise to differences in emotional capacity, and these differences manifest themselves in the presence or absence, in the strength or weakness, of certain feelings.

Every form of feeling is more or less *complex*, and by association and combination feelings become still more complex, and this is an important fact to the teacher. These associations attach themselves to persons, places, objects, etc. Where school life is happy a favourable association is established between the child and the school, between the child and the teacher. The more readily these associations are formed, the stronger is the association set up and the more rapidly is emotion developed.

CLASSIFICATION OF FEELINGS.

We may classify the feelings with regard to the occasions on which they arise, or the kinds of intellectual activity most

closely engaged in their production. But undoubtedly *the best classification is that which is based on the order of their development.* It should proceed from the simple to the complex, from the more primitive to the more derived, from those involving a low degree of representation to the more ideal states.

1. **Egoistic Feelings.** From the order of development we have already learned that the first feelings are mainly egoistic. They are the first to be developed because they spring from the instinct of self-preservation and growth. They are concerned with pleasures and pains, the wants. desires and general well-being of the individual. In early life we are absorbed in them because they affect our own welfare. They include *Fear*, *Anger*, *Antipathy*, *Love of Activity and of Power*, *Rivalry*, *Love of Approbation* and the various forms of *Self-Esteem*. From this enumeration we see that some are directed towards or against others and are anti-social in their nature.

2. **Social Feelings.** These also are directed towards others, but in a favourable way. Their existence shows that man is a gregarious animal endowed with what are called "social instincts," seeking companionship and friendship. As these develop the child becomes less concentred in self and thinks more of others, and this fact will account for their later development. They include *Love*, *Respect*, *Sympathy*.

3. **Sentiments.** These abstract sentiments or reflective feelings constitute our higher feelings and are exceedingly complex in their nature, which complexity will account for their late development. They are usually sub-divided into:—

(*a*) *The Intellectual Sentiment*, or love of truth.
(*b*) *The Æsthetic Sentiment*, or admiration of the beautiful.
(*c*) *The Moral Sentiment*, or reverence for duty.

REASONS FOR CULTIVATION OF FEELINGS.

1. **The Happiness of Child.** The cultivation of the feelings is essential to the happiness of the child. All our

pleasures and pains are states of feeling, and things only interest us in so far as they appeal to our feelings. The organs and faculties of the mind must be stirred into suitable activity if we are to make the child happy. Body and mind are closely connected. They act and react on each other. The healthy stimulation of the one means the proper discharge of the functions of the other.

2. **The Rudimentary Nature of Child Feeling.** We are already familiar with the characteristics of children's feelings. Their selfish, transient and rudimentary nature, their non-representative character, their intensity and violence all bespeak the necessity for careful and continuous cultivation.

3. **The Feelings supply Motives to Conduct.** The feelings supply the motives to action. Hence they are of vital consequence in the formation of character. The "heart" is as much a natural endowment as the mind, and stands in greater need of education. Pleasures and pains act as motives even when only present in idea as well as in reality.

4. **Feeling is Contagious.** Children are specially influenced by their circles of acquaintance. The home, school and street are the chief influences. The street influence is generally bad, the home is an uncertain factor, hence the school must be a good one. Feeling cannot be taught directly, but it can be communicated. It has a strong tendency to radiate. Individual units are attracted to a mob and take on the dominant feeling with amazing rapidity. The cultivation of a "public opinion" or a "class sympathy" in the school is not unknown to teachers.

5. **The Feelings need Control.** In young children the anti-social feelings generally exist in excess, and so need checking more or less. This is a difficult task owing to the weak volition of the child. Hence the necessity for their regulation and guidance by the teacher.

6. **The Feelings need Exercise.** The feelings need both repression and stimulation. Starve the bad ones with

lack of exercise. Give no play to them. This is the negative side. The positive side is to exercise and foster the better feelings. The intellect must be cultivated as an essential. Superstition and terror thrive on ignorance; bias on an unregulated judgment. Furthermore, opportunities must be sought for exercising and strengthening certain feelings as antidotes to others; *i.e.*, speaking generally the higher feelings must be cultivated to weaken or control the lower. The frequent exercise of a feeling so long as it is within reasonable limits will help to form a habit of feeling. If a child is taught to practise a certain virtue, he will by association acquire the feeling prompting to that virtue. Generosity is learned by giving, and courtesy by polite actions.

DIFFICULTIES OF THE CULTIVATION OF THE FEELINGS.

1. **The Training of the Feelings is Indirect.** If we wish to check a certain feeling we must either divert attention from the idea on which the feeling depends, or we must discourage its outward manifestation. Yet still there is an art of cultivating the feelings. We can utilise opportunities favourable to the production of desirable feelings. In this respect the feelings differ from the intellect, which lends itself to direct cultivation. But the indirect nature of the training is not the only difficulty.

2. **The Complexity of many of the Feelings.** The range and complexity of the feelings naturally make progress slow.

3. **The Persistence of Ideas.** This persistence of ideas is a very disturbing factor. The fixed idea becomes a powerful motive to conduct, as is seen in the miser, the bookworm, the love of power and the love of philanthropy. These ideas, owing to the emotional excitement attached to them, come to be followed out irrespective of the pleasure or pain they may cause us. This is the explanation given by Bain of all disinterested or extra-regarding action, such as love or patriotism.

THE CULTIVATION OF THE FEELINGS.

Certain feelings need stimulation whilst others need repression, and the cultivation of the feelings proceeds through these two channels.

1. **Repression of Feeling.** *The education of the feelings is at first negative.* The lower emotions generally exist in excess in young children, and so need repression. The mistake in treatment is that we often begin too soon. The outburst of childish passion must be allowed to subside somewhat before we begin to deal with it. We must then try to divert the child's attention, and the mobility of his mind lends itself to this effort. At the same time care must be taken so as not to wound his feelings.

   The *expression of feeling* requires attention from the teacher. There is a firm association between a feeling and its expression, hence the one may recall the other. Now this may or may not be desirable. A child relieves his grief by crying. An association is set up which every repetition strengthens, and if this association is not broken a crying child may be the product. Stop the crying and the grief becomes more intense. Take another instance. A happy child shows his joy by smiles, by laughter, by singing or by an excess of activity. Check these manifestations and the feeling dies. We thus see that *the repression of bodily expression seems to intensify a strong feeling and to weaken or destroy a lighter one.*

   But the repression of the feeling itself is the main question for the teacher. All repression of bodily manifestation, speaking generally, is advisable, so that no undesirable association may be formed. And this is equally true of physical pains. The tears and groans fix the attention on the feeling, whereas to repress the feeling we must turn away the attention from it.

2. **Stimulation of Feeling.** Speaking generally the egoistic feelings need repression, the social feelings and abstract sentiments stimulation. The amount of stimulation must be regulated. A moderate quantity is sufficient for pleasure. But "moderate" is here used in a relative sense. The moderation will have to fit itself to the varying sensibilities of different children. A strong child needs more exercise than a weakling; a strong brain than a weak one. On the other hand, weak emotional natures need more stimulation than those endowed with strong sensibilities. Excess of

stimulation in any case is destructive of the feeling and soon produces pain. Pleasure ceases when fatigue begins, and fatigue is sooner or later the inevitable result of excessive stimulation. A glare of light or a deafening noise will produce physical pain. Gentle exercise is pleasurable to most people; violent exercise painful. Over-pressure, which counts as one of its factors over-stimulation, is not unknown in some schools. The mind must be kept active, but only to such a degree as to produce a flow of pleasurable feeling. School life will of necessity demand some more neutral or even unpleasant feelings, but they should be kept at a minimum.

But how is the teacher to stimulate feeling judiciously? (1) He may provide suitable exercise for the feelings; (2) He may cultivate the intelligence; (3) He may rely on the forces of example and imitation.

(*a*) **Exercise.** Certain sentiments or feelings may be stimulated by the presentation of suitable objects or situations Beautiful sights and sounds will stimulate the æsthetic sentiment, the tone of a good school ought to stimulate the intellectual and moral sentiments; suffering calls forth pity; love begets love; real merit stimulates esteem; attendance at a place of worship induces the religious sentiment.

(*b*) **Intelligence.** The presence or absence of certain feelings in the individual may be largely due to defective intelligence and especially to a weak imagination. There is a close connection between feeling and knowing, and the cultivation of the one influences the other. With an expanding intelligence and suitable exercise the child will increase his experiences and his emotional endowment at the same time.

(*c*) **Imitation.** The diffusion and contagion of feeling should be utilised. Children are apt to feel like those around them. The repetition of any particular feeling soon makes that feeling common property. The feeling is rapidly imitated by the class, hence the need for the stimulation of the social feelings and sentiments so that good feelings may be acquired. Example encourages imitation The kind teacher incites a feeling of kindness. But the effect must not be allowed to rest there. In every case the feeling must be followed by action, or educationally it is wasted. We repress the selfish feelings and stimulate the higher ones because we want to use them as motives to action, and not because we want to foster emotional indulgences. The mere sentimentalist is one of the weakest of mortals volitionally because his abundant feeling never passes into action.

ABUSES OF THE FEELINGS IN EDUCATION.

Abuses in the cultivation of the feelings may lead to the formation of a **Stunted Emotional Nature.**

(1) *The too frequent wounding of a feeling tends to deaden it,* and this is one of the dangers attending the too frequent use of ridicule. Instead of strengthening, the

teacher destroys the feeling as a motive, *e.g.*, respect, sense of shame, etc.

(2) *The proper cultivation of feeling implies the cultivation of the intellect also. The starving of the one may stunt the other.* Coldness of heart is frequently traced to defective imagination.

(3) A not uncommon error in some infant schools is the *bribing* of children to be good with sweetmeats. This practice is to be strongly condemned, for it appeals to the wrong motive—the appetite—and directs the mind to duty *viâ* the stomach.

(4) The *over-repression of childish activity* from mistaken notions of discipline, the desire to keep a class in a state of chronic quiescence, to maintain a misconception as to what constitutes good order, to treat strong and weak alike, with their widely varying needs for exercise, constitutes perhaps the most general abuse of feeling in school life. The teacher stifles the very activity it is his business to regulate and guide.

(5) The stunting effect of what the world calls "*charity*" is another familiar example. Its indiscriminate use saps forethought, self-reliance and self-respect.

(6) *Self-respect is sometimes further deadened by associating it with unsuitable objects.* A preference is shown for a child because of some superiority of dress, looks, social position or mental endowment, and these become the objects of injudicious praise The result is generally a feeling of injustice and hatred on the part of others, and self-conceit or arrogance on the part of the child himself. Respect in its stronger form of veneration is also sometimes abused by associating it too frequently with matters of creed, class, authority or antiquity, irrespective of their individual claims to this feeling. This is seen in the indiscriminate worship of cash, caste, customs, pedigrees, laws, rank, titles and institutions.

(7) *Over-indulgence in feeling and sickly sentiment* is apt to produce mere affectation of feeling in other people

whose emotional capacity may be more limited. It is one of the results of the influence of fashion on the feelings. Most teachers are more or less familiar with the stubborn child. The obstinacy may be due to causes over which the teacher has no control, but it is very often the result of the mismanagement of feeling in the offender. It may be nothing more than a form of opposition for its own sake, and arising from courage in excess. *The teacher thoughtlessly enters into a contest* and thus fosters the very abuse itself. Heedlessness is a very common fault of children, and it denotes a lack of caution. But *the feeling of caution may be over-cultivated* and watered down to timidity. Within reasonable limits the teacher should let the discipline of consequences operate here. Habits of feeling grow slowly but root deeply. The habit itself may be a blessing or a curse, and it ought to be the teacher's constant care that it is never the latter.

There are two classes of persons each of which lays down a general maxim for the cultivation of the feelings. The one says, "Always reason with your children;" the other, "Always appeal to their feelings." Both are wrong. Each in a measure involves the other, but the better course is a judicious use of both for older children. With young children it is more difficult, for neither reason nor feeling is sufficiently developed for safe appeals. Then there is a disproportion between a feeling and its manifestation in young children which has been previously pointed out, and which might lead the teacher into the very abuses he is seeking to avoid. Reason with your child about everything, says George Eliot, and you make him a monster.

FEELINGS OF PLEASURE AND PAIN.

How do these Feelings arise? A child's mother is taken ill. Many little things about the house daily proclaim the absent mother, and her image is thus affectionately maintained in the child's mind by a multitude of suggesting or furthering ideas. But the thought of her illness is

also maintained by opposing or arresting ideas, and these prevail over the others. The result is a feeling of pain. When the mother recovers, the furthering ideas over-ride the arresting ones and a feeling of pleasure is produced.

Our states of consciousness are always changing. New ideas keep pouring in, and these may assist or conflict with the present ones, or in other words they may arrest or further the movement of thought. The thought process is now acted on by two conflicting forces—the arresting and the furthering ideas. *Resistance to the arresting ideas gives rise to a feeling of pain. The victory of the furthering ideas gives rise to a feeling of pleasure.*

CHIEF LAWS OF PLEASURE AND PAIN.

1. **Law of Self-Conservation.** Bain says that states of pleasure are concomitant with an increase and states of pain with an abatement of some or all of the vital functions. There is a wide correspondence between vitalising energies and pleasure, and depressing influences and pain. Spencer lays down the same law, but with a reservation. He says that pleasure increases as the activity increases *except where the activity is either constant or involuntary.* He shows that pleasures are the incentives to life-supporting acts, and pains deterrent from life-destroying acts.

2. **Law of Stimulation.** We may stimulate *too little or too much;* the beneficial amount depends upon the condition of the brain and nervous system. If too much disturbance is produced in these organs pain is the result. If we pass from a dark room into a brilliant light, we are conscious of pain; a railway whistle is generally too much for our ears. A crude contrast of colours, a discord in music, and two opposing emotions, are all painful from a feeling of conflict. But the stimulation may also be *unsuitable.* The mischief and disorder of some children show this when the school discipline is too repressive. The foolish act of frightening children, with its severe depression of the vital functions, is another instance.

3. **Law of Change.** Variety is the spice of life. In our schools we sandwich work with play; school with holidays. We change our lessons, and with greater frequency for young children. A good time-table is so drawn up as to allow for alternations and remissions of activity. We do all this because we recognise the necessity of change for our mental states, if they are to retain their pleasurable nature. Sameness produces satiety or weariness. We recognise this when we say we can have too much of a good thing. Whatever may be the cause of the pleasure or pain, unless that cause continue to increase, the effect will continue to decrease. If enjoyment is to be prolonged there must be change, and this is especially true of children, who positively crave for it. The reason is to be found in the plasticity and mobility of their minds, and their relative freedom from habit.

4. **Law of Accommodation.** This is nothing more than a particular aspect of the law of stimulation; a stimulus may at first be even painful, but by repetition the organ concerned may so adapt itself to the stimulus that it becomes pleasurable. This is especially true of some of the pleasures of appetite, as in smoking, drinking spirits, eating olives, taking condiments. We recognise this accommodation by calling such things "acquired tastes." In bodily sensations we accommodate our muscles and organs from painful to pleasurable efforts of exertion, as is seen in the more sustained or violent forms of exercise. A child may dislike a bath as much as a cat does, and yet come to enjoy a swim. The feeling of restraint on entering a school, which many children feel, often develops into love.

5. **Law of Habit.** This law is a development of the previous one, and is apparently in conflict with the law of change. It is true that repetition takes off the first keen relish, but a new feeling is called into play. We get used to a certain routine, to certain forms of bodily and mental activity, and we feel any interference as a form of pain. As a rule the feeling is a gentle one, but it may take

intense forms when we are forced to sacrifice our cherished opinions (religious, political), or when we have to break away from any well-formed habit. The athlete who is a smoker has a keen enjoyment of his first pipe when training is over. The lovers' quarrel or the domestic tiff is followed by the joy of reconciliation. The teacher's work here is obviously to form good habits of feeling.

BEARING OF THE ORDER OF DEVELOPMENT ON DISCIPLINE.

We see that in early child-life bodily feelings are dominant, and that the love of activity is the most important factor. We shall learn more of this in the next chapter. We also note that feeling is strengthened by bodily manifestation, hence the teacher's duty is to encourage that manifestation where the feeling is pleasurable, and to repress it where the feeling is painful. Suitable opportunities must be found for the exercise of desirable feelings, so that good habits of feeling may be formed. The feelings are principally egoistic, and consequently anti-social. The school discipline must therefore allow for their checking or regulation on the one hand, and for the cultivation of the social affections, as antidotes, on the other. Finally, as feeling ascends in the scale it involves the intellectual elements, and especially the faculties of memory and imagination. These faculties must therefore be properly cultivated and supplemented later on with the development of the child's reasoning powers, so that the final product may show itself in right conduct and good character.

Summary.

Feeling as Sensation.	Feeling as Emotion.
1. It is due to external stimulation.	1. It is due to internal stimulation.
2. It is immediately presentative.	2. It is re-presentative.
3. It is a state of the body brought into consciousness.	3. It is a state of the mind brought into consciousness.
4. It is primary.	4. It is derived.
5. It is simple.	5. It is complex.
6. It can be localised.	6. It cannot be localised.
7. It is definite in character.	7. It is indefinite in character.

Definition of Feeling.

As Sensation.	As Emotion.
The increase or decrease of mind activity, produced by organic disturbance on the surface of the body, whether external or internal.	The increase or decrease of mind activity produced by all the ideas present to consciousness at the time.

Characteristics of Children's Feelings.

1. They are selfish and rudimentary.
2. They are non representative.
3. They are intense and violent.
4. They are fugitive and brief.

Development of Feeling.

1. Sensuous Feelings—these form the bulk of childish feeling.
2. Emotions—the egoistic are the first to be developed.

Classification of Feelings.

1. Egoistic—these relate to self.
2. Social—these relate to others.
3. Sentiments—these embrace our higher feelings, and are divided into three classes:—
   - (*a*) The intellectual sentiment (a love of truth).
   - (*b*) The æsthetic sentiment (admiration of the beautiful).
   - (*c*) The moral sentiment (reverence for duty.)

Reasons for Cultivation of Feelings.

1. The happiness of the child.
2. The rudimentary nature of child feeling.
3. The feelings supply motives to action.
4. Feeling is contagious.
5. The feelings need control.
6. The feelings need exercise.

Cultivation of Feelings.

1. Difficulties.
   - (*a*) Training indirect only.
   - (*b*) Complexity of many feelings.
   - (*c*) Persistence of ideas.
2. Some need repression.
3. Some need stimulation.
   - (*a*) We must present suitable objects as stimuli.
   - (*b*) We must cultivate the intelligence.
   - (*c*) We must recognise the force of imitation.

The abuse of the feelings in education may lead to the formation of a stunted emotional nature.

Feelings of Pleasure and Pain.

Origin.

Resistance to the arresting ideas gives rise to a feeling of pain; the victory of the furthering ideas gives rise to a feeling of pleasure.

Chief Laws.

1. Law of self-conservation.
2. Law of stimulation.
3. Law of change.
4. Law of accommodation.
5. Law of habit.

QUESTIONS.

1.—What do you understand by the feelings? Why and how should the feelings be cultivated? (E.D.)

2.—State and explain the chief laws of pleasurable feeling. (E.D.)

3.—In what way may interest be allowed to lapse in the course of a lesson? Explain the fact in each case by a reference to the primary laws of feeling. (E.D.)

4.—The expression of all painful feeling should be repressed. Criticise. (E.D.)

5.—In what sense, and by what means, is it possible to develop a stunted emotional nature? (E.D.)

6.—Give what seems to you the best classification of the feelings, and show in what order they develop. How do the laws of development of the feelings bear upon the method of discipline in a school? (C.P.)

7.—What practical cognisance do you take in your teaching of the emotions? In what way should they themselves be made the subject of education? (C.P.)

8.—Why and how is it necessary to use the feelings (*a*) for education, (*b*) for instruction? (E.D.)

9.—"As regards feeling, repression is the main thing in the earlier stages of development. Stimulation becomes more and more important as the child advances." Explain this and examine the following. "An envious child ought not to be placed in a situation which is pretty sure to excite this feeling (C.U.)

10.—Define emotion and classify its principal kinds. Discuss the connection between an emotion and its expression. (V.U.)

11.—Define the place of feeling in the whole mental life, and the proper place of an education of the feelings in a complete system of education. To what extent can a school teacher act beneficially upon a child's feelings by way of correcting such a defect as want of interest in work and of intellectual ambition? (C.U)

12.—Give a simple classification of the emotions. Discuss the problem of the repression or the stimulation of feeling in school age. (C.U)

CHAPTER XVI.

THE EGOISTIC FEELINGS.

FEAR.

Causes. All children suffer more or less from fear, and it is one of their characteristic states of feeling. The *unknown* and the strange are generally the causes. Foolish people frighten children with the dark and with the "bogey," in utter ignorance, it is to be hoped, of the suffering they are causing. The child has *no experience* of these, his feeble intellect cannot assist him, and so he suffers all the terrors which cluster round the unknown. When the child has gained a little general experience, he only becomes conscious of his own *weakness*, *dependence and incapacity*, and in some forms of fear the force of *heredity* is added to this.

EXPRESSION OF THE FEELING.

1. Physical. A child sees a strange animal, which throws him into a state of fear. He anticipates some injury, and at once shows unmistakable signs of his feelings. If the fear is intense, we may note that the child turns pale, and perhaps trembles. Organic derangement has been caused, and excepting those muscles (if any) which are expressly stimulated, the muscular system falls into a state of relaxation, and there is a general feeling of weakness. The expression is strongly marked, even in older people. We describe them as sick with apprehension, as quaking with terror, as livid with fright; the mouth becomes dry, the knees knock, a cold perspiration breaks out, there is a

feeling of collapse. All these facts point strongly to violent disturbance of the organs, and to interrupted motor stimulation (trembling). The feeling may also show itself in the shrinking of the child, in his fixed stare, in his cries, or even in shrieks.

2. **Mental.** The feeling influences the mind as well as the body. *The normal action of the mind is stopped.* The terrifying object strongly impresses the sufferer, and the *attention* becomes firmly fixed on it, hence the stare of the eyes. The *memory* is quickened, for we usually remember our severe frights, and the *imagination* may be over-excited from the influence of the unknown—we may picture all sorts of catastrophes. But the general result is *to remove the intellect from control.* The child is no longer master of his thoughts.

3. **Volitional.** The child tries strongly to get out of the way of the animal, and terror may lend wings to his flight. He seeks some means of escape and then concentrates all his energies upon it. If no way of escape presents itself the terror is increased, and the danger and uncertainty may then combine to paralyse all effort.

FEAR ANALYSED.

Fear arises from a state of mind which anticipates suffering. But there could be no *painful anticipation* without some *previous experience* of pain in some form or other, hence we find a *simple representative element* in it. This involves the setting up of an *association* between the previous experience of pain, its cause or causes and the feelings which accompanied it. With the aid of experience the feeling may be called up in idea, and the *imagination* may stimulate fear not only in like objects and circumstances but even in new cases. Another strange animal may throw the child into a state of fear, but so may the presence of fire, or the dark, or a loud and sudden noise. *Instinctive elements*, the gifts of heredity, are present, as in the fear of a strange animal and the dread of fire. The dread generally

manifests itself on the first experience in such cases, so that instinct seems the only explanation.

Teacher's Work. The management of fear in education is not easy. The feeling has to be checked, yet preserved. It has to be used as a motive force, and yet used as little as possible. Its application must vary in form and degree to suit the varying conditions and temperaments of the children. Acquired fear must be treated differently from inherited fear, yet both manifest themselves by the same signs. It is generally expensive, enfeebling both body and mind, and so conflicts with mental progress. Its effect on the will is equally injurious, arresting action or exciting undue concentration at the expense of the system generally. The teacher who works too much by its aid may secure obedience, but at the price of energetic work.

The teacher will then *seek to preserve the feeling in its milder forms only*. The heedlessness of children often arises from excess of courage, and a mild form of fear in the form of caution is desirable. On the other hand, *where the feeling exists in excess the teacher must check it* by cultivating courage and self-confidence. The feeble will must be strengthened by encouragement and practice. The anticipated evil should be faced. The teacher should *note the causes and seek to remove them*. The association may be the result of accident or of experience. In the first case it can easily be removed—in the latter with more difficulty—by throwing a little light on the object. And, speaking generally, *the cultivation of the intelligence is the best antidote to many forms of fear*, and especially to the more debasing and less excusable kinds, like superstition, fear of dark and "bogey." At the same time the teacher will refrain from placing the child in situations of this kind—silly mothers and nurses do enough of that—so that his treatment will be both positive and negative.

But *these more intense forms can gradually be weakened and refined* into a serviceable state or condition, when it becomes no more than a gentle stimulation. The artistic and sympathetic handling of fear on the stage or in literature is the chief means, and they are largely outside the teacher's influence. Still the teacher can *cultivate affectionate fear*—the fear of giving pain to those we love or esteem. This fear is the guiding line to that fear of God which is the beginning of wisdom. In such fear the depressing effect is far outweighed by its elevating force.

The same form of the feeling should be strengthened in relation to all worthy objects.

The influence of temperament has already been referred to, and the teacher must not expect much from the naturally timid. It has been pointed out that their sins are of omission, and not commission, and that their weakness is an absence of general vigour. Patience and kindness are the chief factors in cases of this kind.

COWARDICE.

Cowardice is one of the results of fear, and has in it an element of meanness. It produces a general depression of tone, and mental depression, however arising, is exaggerated distrust of good and anticipation of evil. The cure of cowardice should be sought through its causes, which should be removed as far as possible.

Teacher's Work. The causes may include *frights*, and these should be either removed or avoided. Sometimes they may rest on a basis of *ignorance*, and the cure must then proceed through the cultivation of the intellect. *Uncertainty* is a result of ignorance, and it often induces cowardice through fear. It may also arise through *weak health* and a feeling of physical incapacity. Such cases require kindness, sympathy and forbearance. The best remedies are beyond the teacher's reach, for they include good or improved conditions of life. But a certain amount of familiarity with, and a knowledge of, the causes will still be beneficial. *Injudicious treatment* often fosters the feeling, and the weak health may be a result of this. Timid children are often made cowards in this way. The children are surfeited with attention and misjudged kindness. The greatest anxiety is shown over every little accident that befalls them, and children are thus unfitted to face the little dangers and risks of their lives. As a result of fear, cowardice may also arise by *association.* The teacher's work is then to form new associations of a stronger and conflicting character. *Heredity and temperament* may also be causes. A family, like a nation, may be cowardly by nature. In such cases the cure is perhaps the hardest and slowest of all.

But the worst form of all is *moral cowardice.* Here the moral sense is weak and needs cultivation, and more will be said of this in subsequent chapters. Meantime, with

all this indirect treatment must proceed the *direct attempt to cultivate courage.* The child must be encouraged to face difficulties and to overcome opposition, or he will most probably be a failure in the battle of life. At the same time *this feeling must not be pushed too far*, or the child may oppose at inconvenient and unsuitable times from mere love of opposition, and as all feeling is contagious, it may occasionally permeate and influence the conduct of a whole class or school.

ANGER.

Origin. The feeling is a primitive one, and *arises from a sense of injury.* In very young children it is nothing more than a vigorous and instinctive protest against physical pain The child is a mere bundle of appetites and sensations, which are ever seeking gratification. Any check to these excites anger. Mr. Darwin says that anger proper is distinctly manifested before the fourth month. Bain points out that "the pains that incite to anger must be such as to sting without destroying the active force. A crushing blow will kill the sentiment of anger and end in terror or grief. Proverbially, small grinding inflictions are the most irritating. Insulting language has a special efficacy. *The connection of the pain with some personal agency is an essential feature;* there is a grim satisfaction in tracing every evil to a person, thereby making an opening for revenge."

EXPRESSION OF THE FEELING.

1. **Physical.** There is an excitation of the system in general, and of the organs concerned in particular. *The activity aroused is excessive;* it sometimes takes a destructive form, and is often accompanied by great explosiveness. Preyer noticed an instance in the seventeenth month. Both Darwin and Spencer explain the physical characteristics by evolution. Spencer says, speaking of animals: "The destructive passion is shown in a general tension of the muscular system, in gnashing of teeth and protrusion of the claws, in dilated eyes and nostrils, in growls; and these are

weaker forms of the actions that accompany the killing of prey." He then goes on to say: "What we call the natural language of anger is due to a partial contraction of those muscles which actual combat would call into play; and all marks of irritation, down to that passing shade over the brow which accompanies slight annoyance, are incipient stages of the same contractions." In violent anger the *fists are often clenched*, and there is a strong tendency to strike something or somebody—the latter for choice. This will explain the smashing proclivities of some angry people. The *clenched teeth* are associated with the act of biting, which is common both to young children and animals. The angry person may also frown or glare. The *increased circulation* will make the eye glitter, protrude, or even bloodshot; the *accelerated respiration* will cause the nostrils to dilate. The *voice* also is affected, and becomes harsh, hoarse or noisy. Bain suggests this may be due partly to the violence of the expression and partly to the inspiring of dread in the victim. The *beating of the heart is quickened*, and there is a rush of blood to the head, face and neck. When the feeling is in excess we go *pale* with anger, and in this case the action of the heart is impeded. The secretion or discharge of saliva, gall, etc., is due to *disturbed digestion* and other functions through the withdrawal of blood and nervous power.

2. **Mental and Volitional.** These aspects of expression will become manifest from a perusal of the next paragraph.

ANGER ANALYSED.

Some injury, real or fancied, is done to the child. The child is thrown into *a state of painful excitement*, and his whole system is discomposed. A crowd of ideas arise in consciousness, and in such rapid abundance that the child is *incapable of reflection*, and well-known bodily, mental and volitional manifestations show themselves at once. Some of these ideas are raised to a high degree of intensity, for in addition to the feeling of injury the self-pride of the

child is keenly wounded, and *there is a strong and immediate desire to retaliate;* to strike, to destroy. There is an appeal to the *instinctive impulse to fight for self-defence*, and to get rid of the cause. *The activities are violently aroused*, and the child's actions are dominated by an irresistible rush of feeling. This activity shows itself in irregular and spasmodic outbursts; in the "fits" and "bursts" of childish passion. If the retaliation is successful the pain turns to joy, and the quicker the process the keener the pleasurable reaction, for the feeling is too exhausting to be long maintained at a pitch of intensity. This *pleasurable reaction*, this rejoicing over the pain inflicted on another, is, according to Mr. Bain, a most markedly human form of the passion. If the offending person seeks to make atonement, the feeling very often is soon allayed, and we enjoy the self-humiliation of the offender, but the joy is not so keen as in the case of the retaliation. But the anger is not concentrated on the individual only; it often extends to objects and even persons associated with him, especially when it is not possible to strike directly. Ezra Girdlestone[1] could not strike Kate Harston, but he savagely kicked her dog. The angry child will break, spoil or destroy the toys of its offending playmate when he can neither bite nor strike him, and he will often do both if he gets the chance. The feeling thus seems to dry up or suspend for a time the tender and social feelings, and to give full play to the baser passions.

FORMS OF ANGER.

Anger shows itself in a variety of forms. There is the explosive form—the **Sudden Outburst**—which is generally characteristic of quick-tempered people. The suddenness and intensity make this form dangerous. The sufferer strikes and then thinks, when he thinks at all.

As opposed to this is the state of **Deliberative Anger;** the state in which wrath is nursed to keep it warm. Feeling

[1] Conan Doyle, *The Firm of Girdlestone.*

does not here cripple the intellect and the will, but utilises both.

When this form of feeling is present in great strength it may pass into **Revenge.** Here retaliation becomes a fixed idea, to be carried out at any price if possible. Both the intellect and the will are again pressed into service. The intellect subscribes the means and the will seeks to carry them into action. The feeling is especially contagious, and will affect a whole class, community or nation. History is fertile in illustrations of this. It also possesses this special property: the longer the satisfaction is delayed the greater the sweets of success.

When anger is firmly rooted it becomes **Antipathy.** It is an expansive form and embraces a wider range of objects than any of the previous ones. It even travels into the field of æsthetics. We form antipathies to the ugly, the useless, the unsuitable, to persons and places, to creeds and customs.

Another form of rooted anger is known as **Hatred.** It is a stronger form than antipathy, and is due to a relatively permanent cause or causes. It rests on an irascible basis, and Bain says to be a good hater one needs only to be irascible by nature, and to be placed in some relationship of frequent encounter with the authors of the offence; class hatreds, party spirit and sectarian strife frequently illustrate this.

Malevolence is a form of anger with a peculiarly strong pleasure element. The feeling is one of those bitter-sweet compounds in which the sweet predominates. The evolution school suggests its origin from the feelings associated with the destruction of an enemy. The strong feeling of elation which follows victory probably derives its strength from the addition of other elements. This intense enjoyment depends among other things on temperament and the stage of development reached. Where the sympathetic affections are weak and the lower conflicting passions are unusually strong, the pleasure of malevolence reaches its

zenith. And this happiness will generally last as long as retribution fails to overtake the offender. The feeling also often scatters itself indiscriminately, and from mere excess of irascibility may discharge itself on anybody, innocent or guilty. It is a case of first come first served.

TEACHER'S WORK.

The teacher's task is, as in the case of fear, a double one, and on that account the harder. He has both to repress and preserve; to check and refine. He has also to make allowances for the temperament of the child, the nature of the provocation, and the special form of anger displayed.

1. **Repression.** The teacher should *allow anger to subside* before he attempts to deal with it. If immediate action is taken at all, it should take one of two forms: (1) The voluntary self-humiliation of the wrong-doer, or (2) a compulsory humiliation inflicted upon the wrong-doer. Bain assures us that both of these are found to answer their end. But, as a rule, the feeling should wear itself out somewhat before being subjected to treatment. The mind must get back, more or less, to its normal condition before it can be appealed to.

   As prevention is better than cure, it will be advisable for the teacher to *avoid all irritating causes.* For this purpose he must strive to make the restraints of discipline as little irksome as possible. Strict impartiality, firmness leavened with kindness, corrective language with no irritating elements, and a sympathetic attitude generally towards the children, will reduce provocation from the teacher to a minimum. The removal of provocation is especially necessary in the case of quick-tempered children.

   The force of *association* must be remembered and allowed for. Bodily actions approximating to physical expression of the feeling should be discouraged. The nervous disturbance set up may become a strengthening cause of the feeling. The feeling and its expression may act and react on each other. He who frowns or doubles his fist after the manner of an angry child may actually become angry. "The hand which smooths the frowning brow appeases also the anger expressed by it." (Lotze.) The efficacy of *physical counteractions* is also urged by Kant and others.

It is pointed out that a glass of water may serve a good purpose for the agitated, and that in this way the passion may be physiologically damped down. A warm bath or a seat may relieve the tension of the muscles of the angered one. This is interesting, but not much within the bounds of school discipline.

Where the results are not disproportionate, the teacher might trust to the *discipline of consequences* in suitable cases. The punishment is then natural, and therefore the more likely to be productive of good.

When it leads to acts of *deliberate cruelty* its treatment is specially difficult. In such a case it cannot be passed over, and yet it cannot be checked by physical force. It ought to be checked, even at the expense of considerable severity, and yet a whipping is likely to defeat its own ends. The opportunities for cruelty should be removed, and an attempt should be made to starve the passion whilst other methods are acting positively.

For this purpose the teacher must get the child calm, and subsequently work on his intellect. *His reflective powers should be zealously cultivated.* "You must alter the habits of thinking, you must change the view of the object, before you can alter the feelings." (Edgeworth.) The angry child has perverted notions of his relations to, and treatment by, others. Like a young Ishmaelite, his hand is raised against every one. The teacher's work is to remove these misconceptions, and to set these relations and actions in a truer light. He might also be suitably reminded that public opinion considers anger as short madness.

At the same time the teacher will seek every opportunity to *strengthen the child's will.* This will be more fully dealt with under the head of self-control. It will be sufficient here to state that the object is to make the child the master and not the slave of his passions.

But perhaps the best method will be to *cultivate the social affections*, and so stunt the bad by the growth of the good.

2. Preservation. The feeling must be preserved in some of its forms as an aid to discipline. On the teacher's side a righteous anger is a strengthening factor in disapproval. On the child's side a just indignation should be aroused against acts of tyranny, bullying, flagrant dishonesty, treachery and kindred vices. "Be ye angry and sin not" must be a practical maxim to him. In this way are sown

the first seeds of that universal righteous anger which condemns and curbs the cruelties of a nation or a tyrant.

The Treatment of Malevolence. Because of the peculiar nature of this feeling it has been deemed advisable to deal with its treatment separately. Experience has taught that it is rarely (if ever) eradicated, and so it must be refined and adapted. In this form it will then serve the teacher as a motive force, despite its objectionable elements. Attenuation and adaptation should go on together. The teacher must provide suitable outlets as safety valves. *School competitions*, physical and mental, with proper regulation, will supply one channel. The feeling stimulates the energies to victory, and there is a dash of malevolence in the consequent pleasure of success. The weakness of this method is the risk of failure, which feeds instead of starving or diverting the feeling. Hence such contests must be so arranged that success is not only possible but probable. This must not be too obvious or failure will again be the result. Hence the task requires much skill from the teacher. In later days, and outside the school walls, party contests, games, trade, etc., will serve the same purpose.

School discipline rests on punishments and rewards, and the *certainty of punishment*, when deserved, will afford another means. There is an element of gratification in the conviction and punishment of an offender, in the avenging of an injury. Even justice contains a retributive element—gratification at the punishment of crime. It will be sufficient for it to be known that the punishment *has* been inflicted without parading it. Too much indulgence in this feeling is dangerous, and from the teacher's standpoint fatal. Hence school punishments, like legal ones, should generally be inflicted privately.

Suitable *Literature* can be used as another outlet, and outside the school the *Theatre* may also be utilised. The real characters of *History*, and the fictitious ones of the *Novel*, supply a convenient channel for the discharge of excess of malevolence.

The teacher might also avail himself of certain forms of *play* indulged in by children. The malevolent element is sometimes present in such games in some small degree, and if these forms of play were observed and regulated, some good might result. But it may be laid down as a general rule that all games involving any exercise of the destructive propensity should be discouraged; hence the

teacher who elects to work through this channel will have need of great vigilance and judgment.

Bain asserts that the highest refinement of the malevolent gratification is the feeling of the *Ludicrous*. "There is a laugh of vindictiveness, hatred and derision, that carries the sentiment as far as it can be carried without blows. But there is also the laugh expressed by playfulness and humour, in which the malignant feeling seems almost on the point of disappearing in favour of the amicable sentiment. It is of some importance to understand that in play, fun and humour, there is a delicate counterpoise of opposing sentiments, an attempt to make the most of both worlds—Love and Anger. The great masterpieces of humour in literature, the amenities of everyday society, the innocent joyousness of laughter—all attest the success of this hazardous combination."

LOVE OF ACTIVITY AND OF POWER.

Nature of the Feeling. In a normally healthy child this exercise is always pleasurable, so long as it is not beyond his capacity. The spontaneity of the child induces a continuous flow of activity, and this activity is all maintained and directed to the growth and development of the child himself. Hence its *egoistic* nature. But the pleasure of activity is nothing more than the pleasure of power, for the consciousness of activity is the consciousness of power.

Physiologically, activity involves a discharge of nervous force, and *it is this discharge which constitutes the feeling of pleasure.* The pleasure is thus primarily of the sense organs, but a productive use of the feeling in the attaining of some end, so as to yield some further gratification than the mere bodily pleasure, increases the pleasure appreciably. Nor is this all. When we consider the many modes of activity, and the many forms of agreeable feeling arising from them, we get a large number of compound feelings which extend the range and intensity of the pleasure enormously.

The feeling of power is especially gratified in the *overcoming of a difficulty*. The difficulty comes as a check, and acts as a strong stimulus to the activities. Success

is a revelation to the child of increasing power, and a feeling of elation follows. In the cry of satisfaction which follows, Sully states that we have the first rude trace of the emotion of power. The success may be speedy or slow to appear, but the greater the speed the greater the pleasure, the more marked the consciousness of power. The scholar who solves a problem sooner than his class-mates is pleasantly conscious of the fact; and speaking generally, Dugald Stewart says: "Whenever we are led to consider ourselves as the authors of any effect, we feel a sensible pride or exultation in the consciousness of power, and *the pleasure is in general proportioned to the greatness of the effect, compared with the smallness of our exertion.*"

Social influence is a factor in regulating the feeling. When among older boys, the child's consciousness of his weakness is unfavourable to the enjoyment of this emotion, and he may be anxious to get away from this depressing influence. Hence we see that the feeling may be anti-social in its nature. Place the same child among other children, and he will regain that self-confidence which is essential to fresh efforts. This in some measure explains the self-stratification that goes on among children. The love of power induces the child to go where he can excel, for the one-eyed man is king among the blind.

There is a *malevolent element* in some forms of the feeling at least; in fact, Dugald Stewart makes the emotion of power to be the foundation of the malevolent impulse. When it leads to the exercise of cruelty, the feeling is seen in its lowest form. Much of the cruelty of boys to animals and to each other is explained in this way. The feeling is so chronic and so over-mastering, that few opportunities of indulging it are allowed to slip. The suffering caused is often lost sight of in the gratification of this feeling.

The feeling is fostered and encouraged by many of the everyday incidents of our lives, and so it may soon become a *habit*, the permanent feeling of self-confidence, the consciousness of ability. If our ability is questioned it wounds

our *Pride* and *Self-respect.* A recognition of our ability, physical or mental, brings a warm glow of *pleasurable feeling*, which is in some measure due to the gratification of these allied emotions. Our *admiration* is aroused at a display of power by others. We admire in others what we desire for ourselves, and so extend the scope of the feeling.

There are *personal characteristics* which mark the consciousness of power. We recognise it in the erect and lofty carriage, the firm mouth, the self-confident look, the strong athletic figure. In its lowest forms the bodily manifestations approximate to those of anger.

Teacher's Work. The love of activity acts as a *powerful motive* through the presence of pleasure, and this pleasure is of a high order. There are not only the pleasure of the activity itself, but the delights attending the growing sense of power, of acquisition, of aspiration. Without activity there is no development. Through its agency the child learns much before school-days, and it is in this way that he gains that experience of things which lifts his mind out of the infant stage.

The teacher must *utilise, regulate and guide this feeling*, or it will remain, to the detriment of his discipline. He must remember that to be quiet is generally to be unhappy—with children—and too much should not be demanded in this way. *The feeling of restraint is painful*, and mischief or restlessness may be the result. This is nature's way of reminding the teacher that he is incompetent. The same unpleasant truth may be forced on him when he allows their energies to be diverted into *unsuitable channels*. School discipline does not permit each child to be a law unto himself. but the suitable channels are quite sufficient to make this unnecessary. *Bad organisation and faulty classification* may be responsible, but a *lack of observation and sympathy* will more often be the cause. There is one other danger. Children are *greedy of power* and here the necessity of regulation arises. A certain amount of liberty is absolutely essential for full enjoyment, but this cannot be conceded where the feeling is in excess, or where it takes an undesirable form. Restraint may be a misfortune, but indulgence would be a greater one.

The teacher then will *seek suitable channels* for the feeling, and there are plenty at his disposal. The whole curriculum is more or less available, but especially such subjects as kindergarten, hand and eye training, writing, drawing, drill and singing. The charm of these subjects lies in the sense of spontaneous exertion that goes with them. The child is kept agreeably busy, sees his work grow under his hands and enjoys to the full the consciousness of power. The object lesson affords another excellent outlet. Experiments are performed, observations are made or results noticed, and the child is invited to make inferences or discover truths from an examination of the objects themselves. The special strength of this method is that *it falls in with the child's early experiences.* He has seen and handled or observed numberless objects before his school-days, and now his lessons fit in with his habits and inclinations. In this way activity becomes a powerful motive, because the teacher is making his methods support his discipline. In such schools fear is rarely necessary as a motive.

When the feeling is thus fostered as a motive its influence is soon shown in the tone of the school. The children love their work and so form the valuable habits of attention, diligence and regularity. The children can be trusted in such cases to grapple with new tasks suited to their capacity, and the consciousness of this raises the dignity of learning in their eyes. The feeling of liberty is present, a pleasant association is set up with work, and a *habit of work* is formed. They are then in a fit condition to have the advantages associated with honourable work placed before them and to profit by the knowledge.

The total result of such a course of treatment will show itself in *the formation of conduct and character*, as will be further seen when we deal with "habit" and "character."

EMULATION, OR THE FEELING OF RIVALRY.

I. **Origin and Nature.** Wherever a number of people pursue the same occupation simultaneously this feeling exists, hence it is ever present in the schoolroom. Children are ever competing with one another both inside and outside the school, so that we see it is closely connected with the feeling of activity. Its manifestations show it to be *egoistic and anti-social.* The feeling of rivalry may be vague and

weak, but victory generally reveals its presence. It often shows itself where no material advantage can follow success, and where no punishment attends its absence. In fact **it is a natural disposition acquired very early in life which impels us to try to excel others.**

The word rivalry itself implies antagonism; a feeling which shows itself in the *love of combat.* In its lower forms it is *associated with anger*, but in emulation we see it in a more refined condition. We emulate the good and this involves an *imitative element.* But emulation is more than mere imitation. We are not content to copy only, but are carried on by the feeling to strive to excel. We strive to excel because we desire it, and this shows *desire to be a motive.* But there is no anger present. The feeling now approximates to the love of power. The child is more anxious to prove his ability than anything else. In this form "**emulation is a generous ardour which nature herself kindles and nourishes.**" (Willm.) Nevertheless if the feeling is exercised through a prolonged contest, as in competing for a school prize, the feeling of hostility is apt to arise.

II. **Teacher's Work.** The teacher has to remember that the feeling is deep-seated and natural; that school life, with or without his help, is constantly appealing to it; that it is a great stimulus to work and constitutes an important aid to discipline, so that he cannot do without it. It is anti-social and so has to be checked or diluted; it is a great incentive to action and therefore has to be used and regulated. Hence we see that the same difficulties attend its treatment as in the case of the love of activity and power.

It has already been pointed out that if appealed to in excess it develops *hostility*, and this may be crystallised into *antipathy*. This feeling, like sympathy, is very contagious, and so a whole class or school may be unfavourably affected. The teacher will thus see that *there is less need to excite it than to guide and regulate it.* This must be done by *focussing it on objects of worthy ambition* rather than upon mere contests. The refining of rivalry into a generous emulation will be furthered by the *cultivation of the social feelings*, and especially sympathy. *A judicious*

distribution of praise is a great aid to guiding and regulating the feeling. *Prize giving* is not so valuable, and it would be well if we could do without it. But the great majority have not yet learned how to do this. The great weakness is that these prizes fall to intellect in the school and to muscle out of it. Moral excellence, which is at least equally important, is recognised by a minimum of "good conduct" prizes or by nothing at all. Perhaps it is more virtuous in such cases that conscience should be its own reward, only conscience does not yet see it in that light. Even in the case of intellect the prize rarely goes to the most just or the most productive channel. It goes to the most successful, who may not be the most deserving. The result is often a feeling of hostility among the disappointed ones, *i.e.*, the teacher has evoked the feeling he was seeking to restrain; he has proclaimed the worship of the head at the expense of the heart.

But cases may arise in which the teacher must excite the feeling; cases where disposition or habit may be hostile, or where his own bad organisation is hampering him. The indolent, the indifferent, the unhappy, the weak, will readily suggest themselves as such.

REFLECTED EMOTIONS OR SELF-IMPORTANCE.

I. NATURE.

These emotions are more or less egoistic, but they all contain a reflected element. We observe certain qualities in others which appeal to our social feelings. We admire skill, pity suffering, congratulate success, esteem merit and value friendship or kindness. Our attention is then turned inwards, and if we recognise any of these qualities in ourselves a feeling of pleasure arises. The feeling is thus reflected back on ourselves, and becomes a great force in influencing character. The feeling takes a variety of forms, depending on the constituent elements, and is variously known as self-worth, self-esteem, self-righteousness, self-pity, self-complacency, self-gratulation, self-respect, pride, self-reliance. They might all be collected under the common head of self-importance.

II. THE VARIOUS FORMS ANALYSED.

1. **Self-worth and Self-esteem.** This is the simplest form of the feeling, and it is practically explained in the preceding paragraph. There is the observation of the acts and qualities of others; we attach varying values to these, and so decide between man and man; the feeling is then reflected, and we decide between ourselves and others. Of course bias is inseparable from such an act, and this is the great defect of the whole class. This defect is very apparent to us, for we generally "keep the feelings to ourselves," although not invariably so, for we all know people who "think a lot of themselves." The egoistic element is strong, and leads us to expect an undue share of the social feeling involved. Each constitutes himself the Benjamin of the feast. Charles Bray puts it very forcibly. He says that each person is the centre of his own universe, and whoever makes too little or too much of himself has a false measure for everything. This is illustrated by a mathematical statement, thus:—

A trifle + his ego = immensity.
Immensity - his ego = a trifle.

2. **Self-pity.** We see suffering in others. Our compassion is moved and displayed; this brings the sufferer some comfort. An association is thus formed between suffering and pity. We subsequently suffer some loss of privilege, health, etc. We then appropriate the feeling. The sense of injury acts as a powerful stimulus, turns the mind in on itself, a condition of suffering is recognised, association then works, and compassion is stirred by self for self.

3. **Self-complacency.** We dwell upon our own excellencies and enjoy the process. The feeling is like self-worth, in that both prompt us to seek and expect a larger practical recognition. In some forms the reflective element is weak, as when the feeling arises from the possession of wealth or station. The operation hardly goes beyond a state of simple consciousness of superiority, whereas the

reflective element seems to involve, more or less, personal merit. In this respect the sentiment differs from *Self-gratulation*, which always involves the reflective element.

4. **Self-respect.** Here the feeling is carried a stage higher, and is more noble and more altruistic. The egoistic element is present, but in a more desirable form. There is still the high opinion of self, and an eye to the main chance. But that is not all. The conduct which earns respect in others must be copied and maintained at its high standard or self-respect suffers.

5. **Pride.** In its best form this is closely allied to self-respect. It is a noble self-esteem, and indicates an elevation of character. Its characteristic is "a reserve of conscious merit for which no claim is made." (Bain.) The objectionable forms of this feeling are well known to every one—we are never allowed to forget them.

6. **Self-reliance.** The self-reliant man must of necessity have a good opinion of himself. His independence arises from the same reserve of conscious merit referred to in pride. There is also a consciousness of power, the ability to stand alone, or to render help to others. The feeling is of great importance educationally, but its value depends on its degree of strength. Pushed too far, the anti-social element robs the feeling of much of its merit.

III. TEACHER'S WORK.

The teacher must foster the good element in each case, and check the anti-social. A certain measure of *self-esteem* is desirable, so that it may be converted into a proper self-respect. A proper self-esteem is an element in honour, in fact Richter calls *honour* the rough husk of self-esteem. The feeling is an important element in the formation of conduct and character. If conscience were sufficiently developed in children to call up the opposite feeling of *self-reproach* when necessary, the teacher's work would have ceased in this respect; but as it is almost impossible to make children reproach themselves, the teacher might strengthen as an intermediate step the *fear of degradation*. The child who fears to do a meanness, or any other de-

grading act, shows an amount of commendable self-esteem, and is less likely to succumb to temptation.

Again, it is very important that a child should be made reasonably *self-confident*, so that he may successfully face the difficulties of life, and the school offers facilities for the cultivation of this feeling. Silent reading, home lessons, arithmetic, composition, parsing, analysis, all offer difficulties which the child might be encouraged to meet unaided within his capacity. "If you want anything done, do it yourself," is also not bad advice for children if we wish them to grow up *self-reliant*. They will thus be prepared to escape that irresolution and indecision which marks the feeble will.

There is not much risk of over-developing the feeling of *self-importance* in school, except in the case of "show" children, but there is much risk at home. The coddling and parading of their darlings is vastly overdone by too many injudicious and over-fond parents, and so the teacher's difficulties are increased. There is more risk, however, both in school and home, from the abuse of praise. The feeling of *self-satisfaction*, and of self-importance generally, is undoubtedly over-developed in this way. But perhaps the feeling of undue self-importance shows itself principally among children in the form of *boasting*. This active form of *Vanity* is too prevalent among some, who are notorious boasters. If unchecked, such children grow into those self-glorifying bores who are one of the afflictions of society.

LOVE OF APPROBATION.

I. Its Nature. Like all *egoistic* feelings this takes its origin from the impulse of self-preservation and self-assertion, but since it involves a desire for the appreciation of others, it has also a *social* element. A child soon learns to distinguish between the smile and the frown of his mother, and this seems to indicate an *instinctive* factor. The social element shows it to be connected with the feelings of *self-complacency* and *self-esteem;* there is a feeling that the appreciation is merited. The pleasure which follows the smile, and the pain produced by the frown, are strengthened by association and experience. There is an element of *Justice*, too, sometimes present. The child feels that the

praise is justly due, and expects it. The *strength* of the feeling depends on several factors: (1) *If we hold the bestower in high esteem the pleasure or pain is correspondingly great.* The same result ensues if the person is a superior, and the greater the recognised superiority, the greater the intensity. (2) When a state of conflict arises, by an act of *judgment,* more or less biassed generally, *we seek the approval of one person at the expense of the disapproval of the other*, as in creeds or politics. The strength of the feeling is accordingly modified, for we can never quite get rid of the discounting effect of the disapproval. (3) Then the *extent of approbation is important.* Generally, though not always, the greater the number whose approval is won, the greater the ensuing pleasure. So far as the pain is concerned, we seek to lessen it by an effort to form a low estimate of the person who inflicts it.

The *Love of Admiration* is a stronger form of the feeling, and differing in several respects. The feeling of *superiority* is dominant, and Bain says this is due to an extension, by sympathy, of the *self-complacent* feeling. The qualities evoking the two feelings are also different. A duty well performed meets with approbation, but admiration is reserved for virtue, brilliancy, or unusual success. Approbation then is the lot of the many; admiration of the few.

II. **Teacher's Work.** In the treatment of this feeling there are certain facts for the teacher to remember, and certain things for him to do.

1. **Things he should remember.** He must remember that it is one of the strongest feelings we possess, that the disposition to seek the praise of others is natural to children, and that it is one of the most powerful motives to conduct; that it leads to the desire to give pleasure to others, and so becomes a higher motive; that the feeling is especially useful in childhood, since it acts as a powerful motive when higher ones are unavailable. He has to remember the efficacy of its opposite—dispraise or depreciation, and he has to know when and to what extent it must be used. He is not likely to forget that the feeling is often badly handled at home; but he is less likely to see that the

school claims its share of mismanagement also. He must remember the various forms the feeling takes when in excess—envy, jealousy, vanity, bashfulness, and he must also remember the causes of these forms. Finally, he must remember that the feeling is related to that of self-esteem, that children are unequally affected by these, and that both must be preserved more or less, for our very welfare depends on our reputation.

2. **Things he should do.** The feeling requires very careful treatment. It has to be utilised, but restrained and purified. To make it valuable as a motive, *the teacher must make himself loved and respected.* The love of praise in the child will then rest upon a basis of affection and respect, and will become a great educational force in him. The approbation of the teacher will be sought not only in work but in conduct. This will do for a time; but gradually the teacher will turn the child's attention from him to the child himself, so that the child may examine his actions and motives, and rest satisfied with *the judgment of his own conscience.* In this way only will he *make the child self-reliant and independent* of that chronic leaning upon the good opinion of others which indicates weak volition. This is the chief risk in cultivating a class opinion. But this power will need cultivation. The child will gradually learn to *discriminate* between opinions, especially if the teacher assists, and will attach value only to those which are worth it. The good opinion of the wise and virtuous will then act as a strong motive to the child, and the teacher, by his *example*, must show that he is to be numbered in that class. As the *higher feelings* become developed, the teacher will rely more and more on these, and less on approbation.

All this will necessitate a *judicious use of praise.* Only real merit should be praised, and not the fortunate accidents of life. Charles Bray says that praise is often as dangerous as blame, especially when it so easily praises "an unconscious grace in the expressions of the heart, the mien, or the sentiments, and thereby converts it into a conscious one; that is to say, kills it." He also says that "to wish to serve and please others is a virtue; to do so for the praise and applause it may beget is to wish to please ourselves, and if not a vice, is nearly allied to one—for we are then satisfied with what begets the praise, and not with the good done."

Some excessive forms of this feeling have been already named. The over-praised child becomes *vain*. He becomes greedy of the feeling, and seeks to excel in work solely that he may excel in approbation. The *cultivation of the intellect and the higher feelings* should eventually make the child substitute the love of excellence for the love of excelling. But the production of vanity is not the whole mischief, for *envy* and *jealousy* are stirred in others. Hence the necessity for great care.

Summary.

FEAR.

Fear depends on :—

1. The unknown.
2. The lack of experience.
3. The sense of weakness.
4. Heredity.

Expression of Fear.

1. By well-known bodily signs.
2. By removing the intellect from control. The signs are :—
   (*a*) The attention is firmly fixed.
   (*b*) The memory is quickened.
   (*c*) The imagination over-excited.
3. By stimulating (or paralysing) efforts to escape.

Cowardice. One of the results of fear, and has in it an element of meanness.

ANGER.

Origin. It arises from a sense of injury. The connection of the pain with some personal agency is an essential feature.

Expression.

1. Physically—by the arousing of excessive activity.
2. Mentally—by the presence of intense feeling, and the loss of reflection.
3. Volitionally—by the impulse to retaliate.

Forms.

1. Sudden outburst.
2. Deliberative anger.
3. Revenge.
4. Antipathy.
5. Hatred.
6. Malevolence.

Anger compared with Fear.

Anger.	Fear.
1. The representative of the active passions.	1. The representative of the passive passions.
2. Primitive feeling.	2. Primitive feeling.
3. Springs out of an experience of pain.	3. Springs out of an experience of pain.
4. Has a pleasure element—the gratification of the passion.	4. Has no pleasurable element.
5. Induces energetic action.	5. Paralyses action.
6. Has root in the instinct of self-preservation.	6. Has root in the instinct of self-preservation.
7. Anti-social.	7. Anti-social.

TEACHER'S WORK.

I. **Repression.**

1. Allow anger to subside.
2. Avoid all irritating causes.
3. Allow for force of association.
4. Where possible trust to discipline of consequences.
5. Cultivate reflective powers.
6. Strengthen the will.
7. Cultivate the social affections.

II. **Preservation.** Preserve in some forms:—

1. On teacher's side—a righteous anger.
2. On child's side—a just indignation.

Special Case of Malevolence. Find outlets:—

1. In school competitions.
2. In suitable literature.
3. In the drama.
4. In the feeling of the ludicrous.

LOVE OF ACTIVITY AND POWER.

Nature of Feeling.

1. Physiologically it involves a discharge of nervous power, and it is this discharge which constitutes the feeling of pleasure.
2. The pleasure is, in general, proportioned to the greatness of the effect, compared with the smallness of the exertion.

Teacher's Work.

1. Utilise, regulate and guide the feeling.
2. Remember restraint is painful.
3. Organise and classify well.
4. Seek suitable channels as outlets.

EMULATION.

Nature and Origin. A natural disposition acquired early in life, which impels us to try to excel others.

1. The love of combat is an element.
2. It is associated with anger in its lower forms.
3. It contains an imitative element.
4. Desire is present as a motive.

Teacher's Work. Chiefly to guide and restrain.

1. Restrain so as to check hostility and antipathy.
2. Focus emulation on objects of worthy ambition.
3. Distribute praise and prizes judiciously.
4. Stimulate emulation in the indolent, etc.

SELF-IMPORTANCE.

Nature. The feeling which arises from the recognition in ourselves of acts and qualities which we esteem in others.

Forms of the Feeling.

1. Self-worth and self-esteem.
2. Self-pity.
3. Self-complacency.
4. Self-respect.
5. Pride.
6. Self-reliance.

LOVE OF APPROBATION.

Nature.

1. Has both an egoistic and social element.
2. Has an instinctive factor.
3. Justice enters as an element.

Strength depends on :—

1. The esteem in which we hold the bestower.
2. Bias, in the case of conflicting opinions.
3. The extent of the approbation.

Teacher's Work.

1. Let it rest on a basis of affection.
2. Strengthen self-reliance and independence.
3. Teach child to discriminate relative values of opinions.
4. Strengthen by example.
5. Rely on higher feelings as soon as possible.
6. Make a judicious use of praise.

QUESTIONS.

1.—Define emulation, imitation, and the desire to excel in their relation to one another, and compare their value as motives in education. (L.U.)

2.—What bearing [illegible] energy during the course of the day to have (*a*) on the [illegible] on evening work?

3.—Briefly elucidate the egoistic feelings. (C.P.)

4.—What use would you make of emulation in a school? How would you guard against its dangers? (C.P.)

5.—Briefly explain and illustrate by an example anti-social feelings. (C.P.)

6.—Discuss from a psychological and from an ethical standpoint the value of the desire for reputation, or the good opinion of others, as a motive in education. (L.U.)

7.—Bring out the meaning, with a concrete example, of the feeling of rivalry. (C.P.)

8.—Write a short note on the love of approbation, and show its bearing on the work of education. (C.P.)

9.—Give a short account of the love of approbation. (C.P.)

10.—Explain, by help of an illustration, the disturbing effect of violent feeling on the thoughts. Show in what ways children are especially liable to this disturbing influence, and suggest how you would seek to counteract the same. (C.P.)

11.—How should "restlessness" in children be turned to good account? (E.D.)

12.—Analyse the mental state known as fear. (V.U.)

13.—What are the more important educational aspects of children's fear? Examine the proposition that education means the leading of a child to fear in due proportion those things which are worthy of being feared (C.U.)

14.—To what extent and in what way is it desirable that a teacher should concern himself with the games and recreations of his scholars? (V.U.)

CHAPTER XVII.

THE SOCIAL FEELINGS.

LOVE.

I. Nature.

Love is a social feeling, *i.e.*, it is a feeling which has others as its object. In its various forms it is the great cementing force of social life. The origin of sociability and love, according to the evolution school, is in the *gregarious situation*. Man is still a gregarious animal, and loves companionship. It involves a *feeling of protectorship*, for we are all ready to protect those we love. In explaining the origin of love, Bain attaches much importance to the *pleasure of the embrace*. He asserts that touch is both the alpha and omega of affection. No doubt the pleasure of soft warm contact may explain some of the infant's affection, but the cupboard explains more.

II. Causes.

The feeling may be called forth by a variety of causes. The helplessness of the infant generates the *maternal* love. Great pleasures and great benefits dispose one favourably towards the feeling. We "warm" to those who are kind or generous, and we are always more amiable when in a state of great joy. Forms of suffering connected with helplessness and infirmity evoke pity, which often passes into love. We thus see that the feeling is prompted both by pleasure and pain. Bain points out that this paradox enables the feeling to assuage misery as well as heighten pleasure. We see another form of the feeling in *Friend-*

ship, but its highest form is not reached until it prompts to that *brotherly love* which the Samaritan showed to the plundered and injured Jew.

RESPECT AND REVERENCE.

I. **Nature.**

We respect or reverence what is good. But a child must first be able to recognise what is good before he can appreciate it. Hence we see that these feelings demand *experience* and a certain amount of *intellectual development*. They are naturally weak in young children, who can hardly be expected to understand and appreciate such virtues as wisdom, justice, prudence and temperance. The *abnegation of self* involved in them also accounts for their weakness among children. There must be an element of *affection*, or the feeling passes into awe, and this is an important fact to the teacher. His position, personality and acquirements make him somewhat awe-inspiring to children, hence he must cultivate their affections so that the warmer feeling of love may arise.

Respect or Esteem is a weaker feeling than reverence. It was pointed out in the last chapter that esteem is usually associated with *useful* virtues and acts, but *Reverence is reserved for that which is most beautiful in human character.* Ruskin says: "A man's happiness consists infinitely more in admiration of the faculties of others than in confidence in his own. That reverent admiration is the perfect human gift in him; all lower animals are happy and noble in the degree they can share it. A dog reverences you, a fly does not; the capacity of partly understanding a creature above him is the dog's nobility. Increase such reverence in human beings and you increase daily their happiness, peace, dignity; take it away and you make them wretched as well as vile."

II. **Teacher's Work.** If we esteem or reverence a person we like to be with him. We bear ourselves deferentially, and are pleased to render him a service. We desire to imitate him, and so the feeling becomes an elevating force. But

the most potent factor for cultivating these feelings in the school is the personal *example* of the teacher himself. His character and discipline must win the respect and affection of his pupils. He must show due respect where it is required; he must be reverential in manner during religious devotion in school and during the scripture lesson; he must insist on a reverential attitude towards the Bible when used in these lessons. The influence of the church or chapel should be a supplementing force. In addition he will *cultivate the Intellect* of the children by directing their attention to, and explaining what is worthy of reverence. Finally, he must check the sneer, the derision, the *ridicule*, which some children bestow on others in cases involving reverence; he must check their thoughtless outbursts of blasphemy, and cultivate respect for old age.

SYMPATHY.

I. Nature.

There are evidences of sympathy very early in the life of the child. An infant two months old will smile at his mother's face. This early form of the feeling points to an *instinctive* origin. The process is *involuntary*, and merely indicates a tendency to reflect the feelings of others. These reflected acts are the result of an *imitative impulse*. Certain persons, animals or things may attract or repel children, and this is especially true of what is new or strange. The attraction (or repulsion) is unconscious, and so purely involuntary. An *associative element* is involved, and this element rapidly grows stronger. But a fixed association involves *experience both of the feeling itself and its signs* before the child can connect the two, hence a *repetition* of the feeling and of its signs is necessary.

If the feeling is to grow, a good *sense endowment* is a *sine quâ non*. Failure of the senses means failure of the sympathies, and the cramped sympathies of old age in many cases illustrate this. The failure of any particular sense narrows the sympathetic field, and this fact has led some to assert that there is a tendency in the deaf to self-conceit. As the senses of the child are developed new sensations are

experienced, and are associated with their causal objects. The sympathies are extended to a new field, and further play is thus given to the feeling.

Imagination is a most important factor. The child must not only be able to recall in idea the particular state of feeling, but he must have the power of conceiving new emotions, *i.e.*, the child must have a sympathetic imagination. But this is not all. The growth of the feeling depends upon the growth of *intellect* generally. The state of feeling concerned cannot be recognised or recalled without the aid of *observation.* In the sympathetic child there must be a disposition to observe states of feeling, and the capacity to *interpret* them. A child of two years is capable of feeling pity with the more obvious forms of pain, but he cannot go any farther yet because the range of his sympathy is limited by the range of his understanding. But the child has now made the most characteristic step in the growth of the feeling—he is able *to attach the re-excited feeling to another person.*

But the readiness with which the feeling is evoked, and its strength, depend largely upon *his relation to the persons concerned.* It is most active where a similarity of concepts brings about a common consciousness, *i.e.*, where the "I" becomes a "we." There is a community of feeling from a community of interests or opinions. In school the class opinion, and out of it common occupations, similar political opinions, or credal beliefs, illustrate this. The prevalent practice of talking "shop" is one of the evidences of it. Under such circumstances the feeling of sympathy proper often develops into affection.

We thus see that **Sympathy is the capacity to understand and enter into the feelings of others,** and for the benefit of others, even at the expense of personal pain.

II. **Expression.**

We recognise the presence of sympathy by certain well-known signs, which we distinguish by the adjective

"sympathetic." We speak of the sympathetic look, voice, manner, attitude, treatment. We not only take on the feelings of others, but the signs also, and in this way only is our sympathy revealed. Our social life enables us to understand this. People living together are often subject to the same influences, which give rise to the same feelings, which in their turn are expressed by the same signs. An association is formed between the feeling and its sign, and the presence of one recalls the other. In some cases the signs are especially contagious, probably because of their conspicuous nature. The sympathetic cough in church, tears among women, and laughter generally, are instances.

III. **Obstacles.**

We are enabled to infer these from the previous section, and for the purpose of a rough classification, we may group them into three classes—physical, emotional and intellectual or social.

Physical obstacles rest chiefly upon differences of sense endowment, of constitution and temperament. Here nature and habit share the responsibility between them. The active temperament may display too much activity at the expense of sensitiveness. Too much activity leaves less room for the operation of outside impressions. Pure animal delights and the over-indulgence of the appetites are obstacles because of their extreme egotism. The cramping effects of old age have already been noted, and bad health and temperament may produce similar results. A state of pain is also antagonistic.

The **emotional** obstacles, more strictly so called, will embrace more or less all the different forms of the egoistic feelings, such as anger, love of power, antipathy, etc.

The **intellectual or social** obstacles include differences in degree and kinds of education; in social position, as is seen in class opinion; in occupations; in trade jealousies; in the strifes of creeds and politics; in international rivalries; and generally ignorance and lack of sympathy are found together.

IV. **Teacher's Work.**

1. **Things to remember.** In the cultivation of sympathy it will be necessary to **remember the original condition of the child.** His feelings are primarily egoistic, and so there is little or no sympathy. The early instinctive element of feeling in him is anti-social rather than otherwise. He is full of little caprices, and shows a marked aversion to certain persons and things. Perez says he sincerely hates whatever hurts or wearies him; and that the switch and the wash-sponge are to him personal enemies. The earliest displays of the feeling are naturally shown to those more immediately around him, like his mother, nurse, etc., who incessantly minister to his wants. At present his sympathies are all strongly flavoured with the cupboard. And this is easily understood when we consider his tiny intellect and his lack of emotional experience.

There is another important fact for the teacher to remember—**sympathy is incompatible with wretchedness.** *If children are to enter into the pains of others, they must be free from pain themselves.* A previous experience of the pain will assist, but its immediate presence would check the flow of tender feeling from its distracting or engrossing nature. Hence the teacher must see that his discipline does not unreasonably curtail the happiness and comfort of his scholars. A feeling of comfort is conducive to the exercise of the gentle feelings, and there is some philosophy in the statement that the nearest way to a man's heart is through his stomach. Adam Smith points out that the man who is himself at ease can best attend to the distress of others; whereas he who is himself exposed to hardships is most immediately called upon to attend to and to control his own feelings.

The desire for sympathy does not invariably proclaim the possession of a sympathetic nature. We have defined sympathy as taking on the feelings of another for *his* benefit, hence the chief pleasure of the feeling is to the recipient. It is *his* pleasure which is increased, *his* pains

which are assuaged; hence *the desire may exist for sympathy in a purely selfish person.*

It is easier to make children sympathetic than just, because one is principally a matter of feeling, and the other principally a matter of intellect. The order of development explains this. Justice is a virtue, and is one of the products of a well-developed moral feeling, which comes at a later period than the social feeling. It makes higher demands both on intellect and emotion, and the statement is perhaps equally true of adults as of children.

It is also **easier to make children sympathise with adversity than with prosperity.** In most of us *there is an instantaneous impulse to pity people in distress,* and this of itself would account for the preference. But *the force of suggestion* is an important factor. The misfortune of the sufferer immediately suggests our own freedom from adversity as a pleasing contrast, and it is really a special case of the necessity of personal comfort as an element in sympathy already referred to. To enter into the joy of another is far more difficult. Success is unfortunately one of the chief provocatives of envy, and it often requires a painful effort to keep it in the background. In this case the force of suggestion is against us. Jean Paul Richter says: "In order to feel with another's pain it is enough to be a man; to feel with another's pleasure it is needful to be an angel." Besides, there must be a pleasurable element in pity, or sympathy with adversity; otherwise the fondness of children for sad stories and the popularity of harrowing scenes in the theatre and the novel among certain classes are inexplicable. It is "the luxury of woe."

2. **Things to do.** *Work in the concrete* as much as possible, and so try to avoid those displays of emotion which never go beyond indulgence. See that feeling is followed by action Distress should not only evoke sympathy or pity, but a readiness to relieve it, hence touching stories should always follow touching sights—life unfortunately supplies plenty of examples. Work in the concrete

also on the more difficult side of sympathy. Try to get the children to rejoice in the successes of one another. There are opportunities afforded both in school and out, which do not make too great a demand at first, *where the others feel a reflected share in the success* and glory. Most boys rejoice in the success of the school cricket or football team; many of them feel proud at the success of their schoolfellows in *open competitions*, such as public examinations. This feeling forms a convenient bridge to that sympathy with personal success or prosperity which should be the teacher's aim.

A further opportunity for working in the concrete is afforded by the *cultivation of kindness*, not only to one another, but also *to animals*. In childhood pet animals are among the earliest recipients of the child's tender feeling, and this probably accounts for the childish love of stories of animals. Nature and circumstances have here combined to supply a good aid, which the teacher should not fail to use.

An essential condition is *the observation of the signs of feeling in others*, and the teacher will find further concrete work here in cultivating that observation. If the child is to possess a sympathetic nature he must be quick to recognise and correctly interpret the various signs expressing those feelings.

The *Imagination* must be cultivated, and this will involve the cultivation of the *Intellect* generally. The better the feeling observed is understood, the easier and more ready is sympathy evoked. When "put yourself in his place" becomes possible, we have made a decided step forward. We are then better able to understand how the feeling operates, and so are more favourably placed for the arousing of our sympathy. We may do this by an effort of *constructive imagination*, we may do it through a *sympathetic imagination*. In the one case the intellect is the principal factor; in the other the feelings. The form of imagination used will depend largely on the child's temperament. The child of greater intellectuality will probably use the con-

structive form; the more emotional child the sympathetic. The latter is probably the quicker, warmer and more general form among children at least. The aid of *literature* and *history*, and especially the *Bible*, should also be enlisted, so as to teach that broad *Humanity* which is the climax of the feeling.

V. **Uses.**

These should now be obvious. It is invaluable in the school as an aid to study and *intellectual development.* Where the feeling exists between the teacher and class there is little or no trouble with the work. The common occupation of the class is appealed to, and in its turn is reacted on by it, so that as a stimulus to work it operates both in a personal and a class form. Among children weakly disposed to study, the fact that all around them are engaged in that same work acts as a tonic to them.

It is also a great aid to *moral training.* It forms an essential part of most of the virtues, and leads on particularly to benevolence and love. It is thus enabled to act as a check to bad conduct, for a child will not willingly offend those whom he loves.

It increases our social pleasures. Aristotle says it is not easy to maintain a glow of mind by one's self, whereas in company with some one else, and in relation to others, this is easier. We are pleased to meet with a similarity of views, vocally or printed; and this is equally true of our pursuits and tastes.

Summary.

SOCIAL FEELING. *One which has others for its object.*

LOVE.

1. Depends on the gregarious instinct.
2. Involves a feeling of protectorship.
3. Is excited both by pleasure and pain.

RESPECT AND REVERENCE.

Nature. Feelings evoked by the good, present or in idea They involve:—

1. Experience.
2. Some intellectual development.
3. The abnegation of self.
4. An element of affection.

SYMPATHY.

Definition. *Sympathy is the perception and adoption of the feelings of others.*

Nature. Chief elements involved are:—

1. The instinctive or involuntary element.
2. The association of signs and feelings.
3. A good sense endowment.
4. Intellect. This specially includes:—
   (*a*) A sympathetic imagination.
   (*b*) A disposition to observe feeling.
   (*c*) A power to interpret feeling.
5. The relation of the person concerned.
6. The attachment of the re-excited feeling to another person.

Obstacles. These will include:—

1. *Physical*—constitution, age, health, etc.
2. *Emotional*—the egoistic feelings.
3. *Intellectual or Social*—differences in education, social position, occupation, creeds, etc.

Teacher's Work.

I. Things to Remember.

1. The original condition of the child.
2. Sympathy is incompatible with wretchedness.
3. The desire for sympathy may exist in a selfish person.
4. It is easier to make children sympathetic than just.
5. It is easier to make children sympathetic with adversity than prosperity.

II. Things to Do.

1. Work in the concrete.
2. Cultivate kindness.
   (*a*) To each other.
   (*b*) To animals.
3. Teach children to observe signs of feelings in others.
4. Cultivate the imagination.
   (*a*) The constructive imagination.
   (*b*) The sympathetic imagination.
5. Utilise suitable literature.

Uses of Sympathy.

1. It aids study.
2. It aids moral training.
3. It increases social pleasures.

QUESTIONS.

1.—Give some account of the nature and conditions of sympathy. It is said to be easier to make children sympathetic than just, and easier to make them sympathise with adversity than with prosperity. Examine these statements and discuss their educational bearing. (L.U.)

2.—How would you cultivate the spirit of reverence? (L.U.)

3.—Define and give an illustration of the sympathy of numbers. (C.P.)

4.—Analyse sympathy. Give some reasons for its great practical importance. (E D)

5.—Give a short explanation of the "social environment of a child." (C.P.)

6.—Explain the influence of sympathy in the work of the school, showing its bearing both on intellectual and on moral education. (C.P.)

7.—What is meant by the sympathy of numbers, and what is its educational importance? (C.P.)

8.—Briefly explain and show in what way education is concerned with the social feelings. (C.P.)

9.—Discuss the educational function and the value of intellectual sympathy between teacher and pupil. (C.U.)

CHAPTER XVIII.

THE INTELLECTUAL SENTIMENT.

I. Description.

The close connection between the three departments of mind is illustrated by the sentiments. The workings of the intellect give rise to a special class of feelings which more or less accompany the pursuit of knowledge. For this reason they are generally known as the *Pleasures of Knowledge*, although they may be painful sometimes, as in reflection and inconsistency, *e.g.*, in an act of judging there is the stage of reflection, which may be called painful; and the decision, which may be considered pleasurable. The latter stage reveals a *volitional element*, which is also prominent in curiosity, a marked form of the intellectual sentiment, for curiosity impels to action.

We shall presently learn that the intellectual sentiment has as its basis the recognition of the similarity or dissimilarity of the new with the old, that assimilation takes place between them, and that this is done through apperception. The degree of ease with which the apperception is made fixes the degree of the accompanying feeling of pleasure.

The sentiments differ somewhat from the emotions. Speaking generally, they are more spiritual, more ideal, and, as their names indicate, more intellectual. They are less intense, and so more enduring. They are less corporeal, appear later, demand a higher degree of development, and form the base of what is known as culture.

II. **Nature.**

The first abiding feeling is one of *pain*. The child's desire for knowledge is due to a painful feeling of his own *ignorance* and *helplessness* in the presence of something new or unknown. If the thing is not repulsive, or does not clash with his primary instincts, he may enjoy a fleeting pleasure from its novelty or attractive nature. But the desire to know more of the thing soon lands the child into a state of *perplexity*. The pleasure of *wonder* has provoked the stimulus of *curiosity*, which is met with a feeling of ignorance. But strengthening feelings soon arise in a pleasurable form. If the child's senses are appealed to, if he is allowed to handle the object, his *sense-activity* is gratified by the pleasures of reasonable exertion; colour or sound may assist, and his practical *interest* may be aroused from the utility of the object as a toy. It is by the seeing and handling of objects in this way that the child gains his first knowledge of the objects that surround him, and he experiences the first pleasures of the intellect.

But subsequently, as knowledge and experience grow, it is noted that *the feeling varies with the kind of knowledge*. A preference is shown for particular forms of knowledge, although not necessarily to the exclusion of others, and the child's predilections take a definite form, and mark out his special aptitudes. During this process some feelings have merely acted as a stimulus to mental exertion, whilst others have arisen to maintain it. A feeling of curiosity, a desire for relief, may prompt to work; the detection of identities in diversity, and the growing *sense of expansion and power*, or the arising of some special interest may sustain that work.

The presence of *Interest* affords one of the best means for marking the growth of the intellectual sentiment. According to the type of mind it is working on, it may either become deeper or more intense, and so give a special intellectual bent (science, art, etc.); or it may widen or expand, so as to embrace a wider field of knowledge. It

is a case of intension or extension. In the one case the feeling is more acute, in the other more diffuse; but there is growth in either.

The *varied nature of the feeling* is especially illustrated by the *Laws of Association.* In the *Law of Contiguity,* so far as memory and routine are concerned, the emotions are little appealed to. The deadening influence of habit is fatal to any deep or acute feeling, and whatever pleasure is present is negative rather than positive. But the case is very different with the *Law of Similarity.* Diversity surrounds us, is very obvious, and appeals but little to us. But the detection of similarity in diversity is accompanied with *a flash of pleasure* which exhilarates us. The botanists, entomologists, etc., who in new and strange specimens discover similarities to known specimens, experience a quiet glow of satisfaction. The accompanying rebound of pleasure may be partly due to *a feeling of relief,* partly to *a sense of growing power,* and partly to *its practical value* in the reduction of labour, for the discovery of identities lessens labour, as the world of science shows. But the feeling is by no means limited to scientific discoveries. The recognition of similarity in others either of thought, belief, or tastes, is followed by pleasurable feelings. Pleasure again follows the production or recognition of good illustrations, oral or pictorial, and generally these feelings accompany the whole range of intellectual activity.

In its highest form the feeling becomes a pure *love of Truth.* The man who is seeking to discover, to invent, pursues his investigations over long periods of time, and requires special feelings to sustain his task. Love of power, love of fame, the practical interest of success, the pleasure of pursuit, the performance of congenial work, contribute a number of supporting feelings, and so aid in the performance of the task. But a pure love of truth ignores all practical considerations. It is the pursuit of knowledge for its own sake.

But the intellectual sentiments are not all pleasurable.

The *feelings of ignorance*, of *perplexity*, are the pains of the first stage; the pains of later stages are the pains of *inconsistency*, of *discord*, of *failure*. The set task may be *repugnant*. Mental work beyond the child's strength or capacity will produce a feeling of *exhaustion* or of *incapacity*. Failure again may be attended with *disappointment*, perhaps with *humiliation*, and *related feelings*, like envy, anger, malice, etc., may be the result.

CURIOSITY.

Curiosity is such an important factor in the growth of the intellectual sentiment, that perhaps it is advisable to examine it a little more closely. It is *one of the chief springs to intelligence*, and arises from the *restless activity* of children. As a result, every normal child is more or less *disposed to it*. Nearly everything around him, as well as what is new, appeals to the feeling at some time or other, for his mind is as yet free and the objects are fresh.

But like all childish feeling, it is *fitful* and *brief*. Curiosity cannot be maintained without *Interest*. This is first aroused by the *novelty* of the thing, and maintained by the attempt to *find out its causes*, and this is done under the influence of *Desire*. It is further maintained by what may be called *secondary or derived interests*. The personality of the teacher or parent, the beauty of the object, its special utility, may be contributing causes. But no great sustaining of interest can yet be expected. A child will naturally like some things more than others, and will consequently take more interest in them, and this *preference* will be largely determined by his *temperament* and *environment*. The child of active temperament will delight in the kindergarten gifts and occupations, and in manual instruction; a child of greater intellectuality will early manifest a preference for what are known as the more intellectual subjects. This preference thus involves as an element the *natural taste* of the child, and this may co-ordinate or conflict with the other elements. The artist's child may love to draw and paint; the son of a shoemaker may hate

his father's trade; his tastes may lie in a totally different direction. The influence of *example* has also to be considered. In this way the teacher, the parent, the neighbours, may all help to mould the child's curiosity into a definite channel. A child brought up in an intellectual atmosphere has the bent of his curiosity determined, not by the force of example only, but by the constant force of *unconscious sympathy* also. And so, under the influence of these various forces the child's curiosity, as a large factor in feelings of intellect, assumes a definite and permanent form. We are now able to define **curiosity** as that which **"expresses the emotions of knowledge viewed as desire, and more especially the desire to surmount an intellectual difficulty once felt."** (Bain.)

CULTIVATION OF THE INTELLECTUAL SENTIMENT.

The chief aim of the teacher should be to *implant a love of knowledge for its own sake*, and so the whole curriculum and discipline of the school should be shaped for this purpose. Whatever other purposes knowledge may serve, its ultimate function is to *influence conduct and character*. The children should be led to understand that *Knowledge is power* in nearly every aspect of social life—intellectually, commercially, morally.

For this purpose the teacher should make the most he can of *curiosity*. He should both guide and restrain it. The feeling is common to all children, as their many and sometimes odd questions reveal. Deal with these questions sympathetically, and especially avoid showing any feeling of irritation which they may arouse. As a rule, and within proper limits, *a healthy curiosity should be encouraged*, and the object lessons of the school, if properly handled, are a splendid means of doing this.

But objectionable forms of this feeling are sure to arise with some children at times, and here the teacher must first restrain and then try to divert them into proper channels. Mr. Bain says that genuine curiosity belongs to the stage of

advanced and correct views of the world, and he goes on to point out that *much of the curiosity of children is a spurious article*. It may arise from egotism, delight in giving trouble, in being pandered to and served. Questions are put not from the desire of rational information but from the love of excitement. In reply it may be said that after a varied experience extending over many years we are not able to agree with Mr. Bain That it is a true description of *some* is undoubted, but that it is true of *many* is very debateable. It is probably more true of adults.

But it is just this spurious curiosity which will tax the teacher's skill and patience to the utmost, in whatever form he may meet it. Apart from the kinds already specified there is that *morbid* kind which is so prevalent and which forms the basis of so much gossip and slander. The teacher who watches for, detects and restrains this vice is doing a grand service both to society in general and to the child in particular.

There are yet *other dangers* in the educational treatment of curiosity. A common danger is *to exhaust it* by a too prolonged effort or by too much detail. This will arise when the teacher forgets the physical and mental capacity of his pupils. There is also the possible risk of attempting *to force it* under the pressure of authority and *the possible failure to appeal to it at the right moment in the right way*. The too prevalent use of pictures in object lessons is a case in point. The pictures interest by appealing to the æsthetic taste, but they rarely, if ever, arouse curiosity like the object itself. Where the object is reasonably obtainable and manageable it should never be displaced by a mere picture, which may be a capital aid but a bad substitute. Even when it is advisable to use a pictorial illustration it is often produced at the wrong moment. All the teacher's wares are exposed to the full view of the class from the commencement of the lesson instead of being kept in the background and produced as required. The result is that they act as a distraction, arouse curiosity at the wrong moment, and fail

in their effect when utilised. But the greatest danger of all is *the risk of supplanting it as a motive by a lower one*, such as the love of distinction. The desire for knowledge then becomes a mere means to an end, instead of an affection for knowledge itself. This is one of the risks of school competitions.

There are certain other facts for the teacher to remember in the cultivation of the love of knowledge. We have already noted that *the feeling varies with the kind of knowledge*, and this must guide the teacher in his work. Here, as in other cases, *the sequence of teaching must be observed*. Progress must be from the particular to the general. "Particulars" interest more easily and are more easily acquired. "Generals" are harder, and should come later. But learning by particulars is slow and exhausting, hence *the children should be trained to detect similarities* in diversity, and so abridge labour. There is plenty of scope for the teacher's ability. The power of concentration is weak, and only relatively sustained efforts can be made, hence the teacher should avail himself of such *aids* as association, classification and interest. At the same time he must make as much allowance for *special tastes* as possible. Nothing is more likely to check a desire for knowledge than a compulsory pursuit of a distasteful subject.

Summary.

Intellectual Sentiment Described. Its basis is the recognition of the similarity or dissimilarity of the new with the old; assimilation takes place between them through apperception.

Nature of the Sentiment.

1. It arises in a feeling of pain.
2. This gives place to pleasurable feelings.
   - (*a*) Pleasure of sense activity.
   - (*b*) Interest.
3. The feeling varies with the kind of knowledge. **This is** illustrated by the—
   - (*a*) Law of contiguity.
   - (*b*) Law of similarity.

4. The highest form of feeling is a love of truth.
5. The feeling embraces pains as well as pleasures.

Curiosity.

1. One of chief springs to intelligence.
2. It arises in feelings of activity, hence children are naturally disposed to it.
3. It is fitful and brief, hence it requires interest.
4. Temperament and environment influence.

Definition. *Curiosity expresses the emotion of knowledge viewed as desire, and more especially the desire to surmount an intellectual difficulty once felt.* (Bain.)

Cultivation.

1. Implant love of knowledge for its own sake.
2. Remember that the ultimate function of knowledge is to influence conduct.
3. Encourage a healthy curiosity.
4. Differentiate real curiosity from the spurious.
5. Guard against certain dangers which are associated with the training of curiosity.
6. Observe the sequence of teaching.

QUESTIONS.

1.—Write a short account of children's curiosity, and show what the teacher has to do with it. (C.P.)

2.—What do you understand by the intellectual sentiment?

3—Examine the psychological basis of curiosity. Show in what ways it aids attention and the acquisition of knowledge.

4—Contrast the intellectual sentiments with the feelings and with the sensations.

5.—How would you deal with children's questions?

CHAPTER XIX.

THE ÆSTHETIC SENTIMENT.

I. THE SENTIMENT DESCRIBED.

This sentiment is variously described as the Æsthetic Sentiment, the Pleasures of Beauty, of Taste, the Sense of Beauty, and the Æsthetic Emotion. It involves a number of forms, which are more or less connected with it, though all are not related to it, such as the Pretty, the Graceful, the Harmonious, the Sublime, the Melodious, the Ideal, the Picturesque, the Fit, the Orderly and the Proportionate. *It arises in the form of feelings which accompany the sense impressions of Sight and Hearing.* The other senses are much less involved because of their more egoistic nature. The recognition of some agreeable aspect in an object, such as colour, lustre, harmony, proportion, gives rise to a pleasurable state of feeling, which we call the æsthetic sentiment. In its more developed form it is a laborious acquirement, excluding the lower pleasures of sense and appetite, and standing out in strong contrast to them by its refinement and purity. This refining tendency makes it shrink from all that is low, coarse or vulgar. It thus ranks high as an emotion, because it is based upon the perfection of *other* feelings, and begets a love of perfection for its own sake.

It is a relative feeling, and varies both in individuals and communities, but for each community there is, nevertheless, a certain standard of taste which is based on experience, observation and intellect. A long series of competent judges have laid down certain canons or laws, which are

applied as tests, and corrected or endorsed by modern opinion. *When we say an object is beautiful or ugly we express an Æsthetic Judgment*, and *it is this faculty of Æsthetic Judgment which we mean by Taste.* It follows naturally then that the value of our judgment depends upon the extent to which the faculty is cultivated. Our judgments vary because they are rarely purely æsthetic. Other elements are so closely associated with the æsthetic that they force themselves into consciousness, and give colour to our feeling. It is only where the feeling is highly cultivated that such factors as the utility or value of the object can be effectively separated from the effect which the object itself would have upon the sensibilities.

We are thus prepared to meet different grades of the feeling. Even in its simplest form certain fundamental relations are necessary. For instance, in poetry the jingle of the rhyme or the measured tread or even flow of the metre, the harmony of two simple tones, the relations between two parallel lines, all produce a pleasing effect, and constitute simple forms of the æsthetic sentiment. We thus see that **the simple form of the feeling is that which is produced by the grasping of certain pleasing fundamental relations in objects, so far as time and space are concerned.** But when we view a cathedral, or a tree, or a design, or a picture, or when we listen to a musical composition, we get an amalgamation of many such simple relations, all in harmony with each other, and the degree of the feeling depends on the degree of harmony prevailing. Hence **the æsthetic feeling as a whole arises from the recognition of the harmonious blending of a number of simple relations.**

II. THE ÆSTHETIC SENTIMENT ANALYSED.

1. **The Sensuous Element.** When the sense organ of sight or hearing is *perfectly stimulated*, there arises a feeling of pleasure, as when we view pretty colours, brilliant lights, graceful forms, lustrous bodies; or when we listen to

pure musical tones in simple combination. *With very young children there is no clear distinction between the pleasant and the beautiful.* Experience is required to form the sense of beauty, and to separate it from those general feelings of pleasure which are aroused by the presentation of objects to the senses. The difference is well marked, for *the æsthetic sentiment is separable from its exciting cause, whereas the purely sensuous feeling is an enclitic to it.* "The agreeable in sugar is very different to the agreeable in a musical chord, and the beauty of an architectural structure does not lie in the stones, but in their arrangement." The sensuous element is also seen in the *love of activity*, that *creative impulse* which leads to efforts at imitating nature. The kindergarten and the clay-modelling of our modern schools are a recognition and a utilisation of this element. There are also certain *physiological methods of expressing the feeling* in some of its forms; *e.g.*, when viewing the sublime we are conscious of the raised head, the stretched stature, the expanded lungs; the fixed look is associated with the pretty; the pleased or admiring look with the graceful.

2. **The Intellectual Element.** The presence of the intellectual element marks a higher form of the sentiment. The *perceptive faculty* is called into play in the threefold division of the æsthetic field—colour, form, sound. Certain arrangements of colours, either by contrast or by harmony, please, and the child learns to appreciate these. The beauties of space form (symmetry, proportion), of time form (rhythm, metre, melody), are also gradually apprehended and enjoyed. By the mental operations of *observing* and *comparing* the child learns to recognise the agreeable relations existing among the various objects presented to his senses. His improving *discriminative sensibility* has enabled him to discover these relations, and to recognise that happy combination of separate elements which forms a harmonious unit.

3. **The Element of Ideality.** This also is an intellec-

tual element, but it deserves special notice because of its importance. It marks a further stage in the development of the feeling. The ruined castles of the Rhine, the mountains of Switzerland and historic sites do not appeal to children because they lack the interest of *association*. Their *suggestive force* as a contributing element to the play of imagination is relatively weak or absent. *Knowledge* and *experience* are necessary to ideal pleasures, and these the child does not yet possess in sufficient abundance.

Common Characteristics of the Æsthetic Sentiment.

(*a*) It has pleasure for its immediate object.
(*b*) It has no disagreeable accompaniments.
(*c*) It is open to all.

III. CULTIVATION OF THE ÆSTHETIC SENTIMENT.

1. **Things to be Remembered.** Progress in cultivation requires the teacher to remember that *no practical element* is involved. The delight in a picture must be free from market value if the feeling is to be æsthetic.

Art enjoyment is essentially *social*. Numbers can enjoy a picture gallery, a beautiful view, an oratorio or a piece of poetry at the same time, and this pleasure is increased by common sympathetic tastes. Perez says the child testifies to this social character of the feeling in his instinctive impulse to call his mother's attention to what is pretty.

Art emotions are a great *aid to morality*. This follows from the law of relativity, for those who come under the pleasurable influence of these feelings will prefer them to the mere gratification of the senses and appetites. As the feeling grows the good and the beautiful thus tend to become synonymous.

They are also an *aid to Education generally*. They sandwich work with pure and lofty pleasures which act as tonics. The art education of the child widens his interests and forms an appreciable addition to his pleasures. But the intellectual element is strong in the sentiment, hence a

happy and powerful association is formed between mental activity and art emotions, which acts as a strong motive to education generally.

Their sensuous element makes them *easy of acquirement*, and especially in those cases where native *endowment* is favourable. Those children whose special aptitudes lean to the art side will need little trouble, but a measure of success can be obtained by careful and systematic cultivation even with those less favoured. A weak sensibility to colour or form may yet be accompanied with susceptibilities to tenderness.

2. **Things to be Done.** From what has already been said the teacher will see the necessity for the *cultivation of the Social Affections*.

The *cultivation of the Intellect* is equally important. *Observation, Imagination, Discrimination* and *Judgment* are all involved.

The *cultivation of the creative faculty* is specially necessary. In early life children grasp only the sensuous side of art emotions. This makes the beginning easy, but it must not stop here. The teacher must help his scholars to detect those elements of beauty which are either too obscure, too complex, or too expansive for immediate perception.

IV. CULTIVATION IN SCHOOL.

In addition to what has already been said about cultivation, school life places certain means within the teacher's hands which materially assist in this work, and which may be regarded as special aids to the inculcation of the general principles laid down in the preceding paragraph.

The *environment* of the child may be made a permanent influence in moulding taste. The colours of the walls and the wall decorations should be artistic; both school furniture, decorations and the building itself should be marked by proportion and simplicity of design; the school should be clean and bright; the furniture orderly arranged; the teacher's dress in good taste. The presence of a few plants

and flowers also has a refining influence; and speaking generally the addition of anything that is pretty, graceful or attractive should be utilised. Owing to the plastic nature of the children these first impressions are very important.

But environment should not be limited to the inside of the school. *School rambles* under the guidance of a competent and sympathetic teacher afford the opportunity of cultivating pure tastes, such as a love of flowers, of scenery and of nature generally.

The work, both inside and outside the school, should lend itself to the careful *training of the observation*. The object lesson, lessons in physical science, kindergarten, clay modelling, and school rambles, will be specially useful for this purpose.

The *Imagination* will be trained by good lessons in history, literature, and especially poetry. Fairy tales supply a fund of ideal pleasure to children. Some of the kindergarten exercises are also suitable for the same purpose. As knowledge grows, the force of suggestion will become greater through increased experience and added associations.

The *creative impulse* is fostered and developed by the kindergarten gifts and occupations, by clay modelling, by hand and eye training, by original composition, and by drawing.

There are certain well-known factors which are prime to the art emotions as a product, and which fall within the child's mental capacity. *Symmetry*, *Proportion*, *Design* and *Form*, are taught by the kindergarten, by drawing, geometry, writing, the first lessons in reading, clay modelling, manual instruction, and by various object lessons; *Order* and *Rhythm* by music and poetry; *Colour* by special lessons on colour (object lessons), and by many of the kindergarten exercises; *Time* by music and drill; while *Neatness*, *Order*, *Arrangement*, should characterise the personal appearance of the children, the arrangement of the school furniture, and the contents of the desks, cupboards and cloak-rooms.

The *Moral* influence of the æsthetic sentiment has already been noted.

Summary.

The Æsthetic Sentiment Described.

1. It arises in the form of feelings which accompany the sense-impressions of sight and hearing.
2. It is a relative feeling, and varies both in individuals and communities.
3. When we say an object is beautiful or ugly, we express an æsthetic judgment.
4. We call this faculty of æsthetic judgment Taste.
5. The simple form of the feeling is that which is produced by the grasping of certain pleasing fundamental relations in objects.
6. The æsthetic feeling as a whole arises from the recognition of the harmonious blending of a number of simple relations.

The Sentiment Analysed.

1. The Sensuous Element.

(*a*) Perfect stimulation of sense-organ gives pleasure.
(*b*) There is a distinction between the pleasant and the beautiful.
(*c*) It shows itself in the creative impulse.
(*d*) There are certain physiological methods of expressing the feeling.

2. The Intellectual Element.

(*a*) Involves the use of the perceptive faculty.
(*b*) Discriminative sensibility acquired.
(*c*) This involves observation and comparison.
(*d*) The sense of harmony apprehended.

3. The Element of Ideality. Depends on the force of suggestion, which is due to:—

(*a*) Association.
(*b*) Knowledge and experience.

Its Common Characteristics.

(*a*) It has pleasure for its immediate end.
(*b*) It has no disagreeable accompaniments.
(*c*) It is open to all.

Cultivation of the Sentiment.

I. Things to be Remembered.

1. No practical element involved
2. The sentiment is social.
3. It is an aid to morality.
4. It is an aid to education generally.
5. The sensuous element makes the feeling easy of acquirement.
6. Native endowment must be allowed for.

II. Things to be Done.

1. Cultivate social affections.
2. Cultivate the intellect.
3. Give play to the creative faculty.

School Cultivation.

1. See that the child's environment is suitable.
2. Utilise school rambles.
3. Cultivate careful observation.
4. Develop the imagination.
5. Cultivate regard for symmetry, etc.
6. Utilise the principle of habit.
7. Make it an aid to the moral sense.

QUESTIONS.

1.—How may education in the love and appreciation of the beautiful be made to react on intellectual and moral education? (L.U.)

2.—What do you mean by "crude," "healthy" and "refined" tastes? How far is the cultivation of the æsthetic feelings practicable in ordinary school work? (L.D.)

3.—Name the subjects in a school course which are helpful in the formation of tastes or widening of interests. Give reasons. (E.D.)

4.—Briefly elucidate æsthetic pleasures. (C.P.)

5.—Give a brief account of the faculty of æsthetic taste, specifying the main conditions of its development, and estimating the province of school work in improving it. (C.P.)

6.—What is meant by a refined (æsthetic) taste, and what is its educational importance? (C.P.)

7.—Explain the part played by Imagination (1) in the growth of knowledge, (2) in the refinement of the feelings. How far is it possible to educate the imagination? (V.U.)

8.—How far is it possible to define pleasure? Examine the theory which connects the pleasurable with the healthful. (V.U.)

CHAPTER XX.

THE MORAL SENTIMENT.

I. VARIOUS NAMES OF THIS SENTIMENT.

This sentiment is met with under a variety of names, with which it will be advisable for the student to become familiar. When analysed they are by no means all synonymous, although they are more or less synonymously used. It is variously known as the Moral Sentiment, the Ethical Sentiment, the Feeling of Moral Obligation, the Moral Judgment, the Sentiment of Duty, the Feeling of Reverence for the Moral Law, the Sentiment of Moral Approbation and Disapprobation, the Love of Virtue, the Ethical Judgment, the Moral Consciousness, the Moral Reason, the Moral Sense and Conscience. In many of these it is a case of bestowing the name of a dominant element upon the whole feeling.

II. FUNCTIONS OF THE MORAL SENTIMENT: MORAL JUDGMENT.

The proper field for this sentiment is *human action*, and that action only so far as it is *voluntary*. Unwilled action has no moral quality. The instinctive and spontaneous movements of infants are neither morally good nor bad. A flood may destroy crops, or benefit them as in the Nile basin, but neither act is moral. The moral judgment is passed on conduct only, and has regard to the *motives* which prompt that conduct.

But as there is no conduct without volition, some carry the judgment to the *Will* only. In the preceding paragraph we

have noticed that the ethical judgment is pronounced on voluntary acts, but the point here is that the same feeling is aroused by a mere recognition of the quality of the will. If a person wants to do wrong we condemn him morally whether he does the wrong or not. If he wills to help another we praise him. The approval or disapproval is bestowed on the will. It should be noted here that a will which does not pass over into action is nothing more than desire, and so, strictly speaking, is no will at all. But it is maintained that the function of the moral judgment is the approval of good will. The important point practically is that a good will means good conduct.

But a good action may be followed by a bad result. We sometimes have to excuse unfortunate conduct of this sort by saying we meant well. Thus we see that the *Motive* or *Intention* of the act has to be considered, and here again we are met with the same conflict of opinion in another form. One school (the Intuitionists) say that the moral judgment is concerned entirely with the *Motives* to our actions, and that our actions are good or bad according as our motives are good or bad. Another school (Utilitarians) assert that the morality of the act depends entirely on the *Intention*, *i.e.*, upon what the agent wills to do. They argue that the motive of the action has nothing to do with the morality of the action, though much with the worth of the agent. But the judgment must concern the motive somewhat at least. For what we judge is conduct, and conduct not only includes the act itself, but the motives and character underlying it.

This leads us to those who assert that the judgment is really on *Character*. Single acts stand as elements in character. The particular act under judgment is raised in consciousness, but there is a mass of acts forming a subconscious groundwork which gives colour to the judgment. A man does something wrong; we know his character; we are not surprised—in fact "it is just what we expected." We judge the act under the light of his general character.

This view of the function of the moral judgment enables us to include *habitual actions* which have ceased to be voluntary. The habit is the result of a number of voluntary acts, and so is an element in character. We really judge the formative acts when judging the habit.

III. NATURE OF THE MORAL SENTIMENT.

The nature of the moral sentiment is revealed by a knowledge of such essential terms as moral obligation, moral law, the moral standard and moral judgment. Of these the last has already been dealt with.

1. **Moral Obligation.** *A feeling of obligation or "oughtness" is the essential condition of the Moral Sentiment.* It is this feeling which makes the moral law binding on us, and under the influence of which we voluntarily submit ourselves to its rule. The perception of right conduct calls forth our approval, and with it is indissolubly associated a feeling that we *ought* to do it. Any breach in the moral law is consequently followed by the sting of conscience. This feeling is binding on all, and is what Kant calls the **categoric imperative.**

It is important that the student should understand this term. A *Category* may be defined in one sense as a positive assertion or affirmation of some quality or predicate, so that categorical will signify something which is positive and absolute, admitting of no conditions or exceptions. The use of the word *Imperative* is to signify what is obligatory, binding, authoritative, commanding. We thus see that a **Categoric Imperative is absolutely and universally binding on all.** And this is the great peculiarity of the moral law, for it is the *only* categoric imperative in the whole range of law. We obey the laws of the state to avoid the penalties attached to their infraction; *i.e.*, we obey them as a means to an end. Similarly we may be just or prudent for the sake of the resulting happiness, and not from a feeling of pure virtue. In all such cases the imperative is not categoric but *hypothetical.* It is not absolute and unconditional, but merely indicates something done as a means to an end.

We thus see that *our approval of right conduct impels us to like action, and this is the true Moral Sentiment.* But conflicting impulses may intervene, and it is this possibility which is implied in the word "imperative," or "dictate" as it is sometimes called. Sidgwick considers the notion of "oughtness" as *ultimate and unanalysable, and too elementary to admit of formal definition.* Some (Intuitionists) consider that **the feeling of moral obligation arises from the knowledge of an external law of right,** whilst others (Utilitarians) explain it as **the result of custom and experiences of utility.** The latter school assert that when we say a man "ought" to do anything, we mean "that he is bound under penalties to do it; the particular penalty considered being the pain that will accrue to him directly or indirectly from a kind of conduct which his fellow-creatures dislike." This view, however, is open to this serious objection, that "there are many things which we judge men 'ought' to do, while perfectly aware that they will incur no serious social penalties for omitting them." (Sidgwick.)

2. **Moral Law.** The moral law, unlike the law of the state and other laws, is not imposed on us by external authority, but by *self.* It is internal, and has to be expressed in the form "be this," and not "do this." Leslie Stephen says the possibility of expressing any rule in this form may be regarded as deciding whether it can or cannot have a distinctly moral character. Professor Green also remarks that it "is not by the outward form that we know what moral action is. We know it, so to speak, on the inner side. We know what it is in relation to us, the agents; what it is as our expression. Only thus, indeed, do we know it at all."

Moral law is distinct from civil law. It is *wider in its application; loftier in its aims.* Many things may be legally right which are morally wrong. The civil law exacts a social minimum; the *Moral Law demands a social maximum.* Civil law is external; moral law *internal.* **It is the sum total of all the rules of conduct which are enforced by a feeling of Moral Obligation.** The moral law *deals*

with motives or intentions; the civil law with actions. You can enforce physical actions by physical compulsion, but you cannot thus compel conviction and belief. The civil law in days gone by compelled a man to go to church, but it could not compel him to believe.

Morality is sometimes said to be relative, but this is only true in a sense. The conception of virtue varies with time and place, with the age and the country. But the underlying broad principles are true of all times and places, and of universal application. Every man approves of certain actions which he feels that he ought to perform, and the moral law it must be remembered *is an ideal*, and only states what *ought* to be or happen, not necessarily what is or does happen. As Mackenzie neatly puts it, "the supreme moral principle, whatever it may be, lays its commands upon us absolutely and admits of no question. What we *ought* to do we ought to *do*."

3. **The Moral Standard.** Different ages, different countries and different communities have held and hold differing opinions as to what is right and wrong, hence we find *different standards* set up from time to time. The common result has been the formation of *local standards.* These may contain something that is common and something that is different. A *common standard* is found by the comparison of the various systems and the adoption of the best elements from each.

It has already been pointed out that the moral law transcends the civil law by noting the motive as well as the deed. Now custom, civil law and the moral law may conflict one with the other. In early days *custom* was the moral standard; with advancing civilisation *Positive Law* became the standard. But these conflicts showed the imperfection of each, and so men were led to look for some wider and deeper standard, which they found in *Conscience.*

IV. GROWTH OF THE MORAL SENTIMENT.

The sentiment has its *origin* in the domestic subjection of the child. It therefore arises in a feeling of *authority,* of

being governed. The child does not do wrong because he *fears* the penalties, and so his morality, so far as it goes, is *negative*. But *observation* soon teaches that not only are bad acts attended with pain, but that good acts are expected and recognised or approved. In this way feelings are aroused, and the **Moral Sentiment** might be defined at this stage as nothing more than **pleasure in the good and pain in the bad.**

But to have progressed thus far the child must already have formed an *association* between certain feelings and certain acts, which association operates not only in self, but is extended to like actions in others. A like act recalls a like feeling. The child sees a good act done to another. His *experience* enables him to recall the associated feeling, and so he enjoys a warm glow of satisfaction. The recalling introduced representative elements which involved a use of the *Imagination*. If the child did the good act himself the feeling of satisfaction is all the greater, and he would now be able to understand the double blessing attending the practice of such virtues as mercy. But all this implies *Discrimination*, which in its turn must have been preceded by the observation and *Comparison* of many states of feeling and many different actions.

The fact that the child has been able to discriminate between different feelings shows that the *Moral Judgment* is forming. Gradually it develops from dealing with the act only to dealing with the motive or intention and the character generally. The "ought" feeling is growing, and like a feeling is beginning to attach itself to the judgment without any conscious process of reasoning. The judgment is as yet imperfect owing to the weakness of the intellectual element. The formation of a judgment needs some amount of reasoning and a weighing of evidence. Refining influences are wanting.

The growth of the *Intelligence* in general and of the power of *Reflection* in particular contributes to this refinement. Increasing intelligence enables the child to distin-

guish those more subtle distinctions between right and wrong which are necessary sometimes for a first judgment. It must be remembered that in practice, as a rule, these judgments are rapidly formed, hence the necessity for increasing intelligence and practice for the possession of that rapid perception, which may assist the child not only to be more just in his judgments, but to steer clear of wrong himself. Yet hasty judgments are not desirable, and the growth of Reflection tends to check the summary nature of his judgments, and so helps them to become not only more just but more moral.

To prevent error, further correcting influences are still required, and one of the most important of these is the growth of the *sympathetic affections*. These soften the judgment and modify the personal element. Under their influence the child's morality becomes positive as well as negative. Fear still acts as a deterrent, but sometimes at least it is that laudable fear that dreads to inflict pain. Where he loves he does right, because he wishes to please. And by association, if he loves good people he will naturally learn to love good actions, and so he will "seek good and ensue it." At this stage then **conscience** might be defined as **the feeling which makes us wish to do right.**

The social environment of the child gradually forms in him a *Sense of Duty*. He is quick to exact his rights, but slow to recognise his duties. He eventually learns, more or less, that where a conflict arises, self must often be sacrificed to the good of others. The ideal is to do to others as you would that others should do to you. This is too exacting for boyhood, and in most cases for manhood too; but good social experience tends to make him understand that his individual conception of duty is an important element in his morality. He learns with increasing force that public sanctions are attached to his actions, and that right actions are expected of him; and he will understand that those only are **right actions which conform to the moral law.** Experience supplies him with repeated examples

that these actions tend not only to benefit others, but himself also. The "imperative" to him is still more or less hypothetical, but he is approaching the bridge which leads him to the categoric.

The *self-judging conscience* is the final stage of growth. Through the operation of his sympathies, he now feels a righteous indignation not only against wrong-doers, but against wrong itself. His moral judgment condemns it; it is a breach of the moral law. On the other hand, the approval of a right action in another now carries with it a feeling that he too ought to perform a like action under like circumstances; and not only he, but everybody. He has reached the feeling of "oughtness," the essential condition of moral obligation. He recognises not only his own subjection, but the subjection of everybody to the moral law. **Moral obligation** is thus defined as **the feeling of personal subjection to the Moral Law.**

V. MORAL EDUCATION.

Moral education is a wider term than the teaching of morals. The latter is confined to the school so far as the teacher is concerned; the former touches every conscious moment of the child's life. The latter works principally through exposition in set lessons, and through the school discipline generally, whilst the former works principally through example. The latter is often abstract; the former is always concrete, and therefore the more influential.

The moral sentiment is a *motive* to conduct, hence its importance to the teacher. The object of its cultivation or moral training, is the subjection of the lower feelings to higher ones; the improvement of the moral judgment; the observance of the moral law; the strengthening of the feeling of moral obligation. To attain these objects the teacher must remember that it is an art and not a science **—the art of inclining the free will towards the good.**

Its *essential conditions* embrace:—

1. The study of the instincts and disposition.
2. The formation of habits.
3. The culture of the feelings, embracing a proper classification of the virtues and vices.
4. The education of the will, embracing a clear apprehension of motives.
5. An effective and beneficial discipline.

These conditions are all treated in some detail in other chapters, but the special aim here is to briefly note the application of some of those conditions as means in moral training.

1. **Discipline as an aid to Moral Training.** The teacher's work as a disciplinarian is one of prevention as well as cure, hence he must be careful in the formation and enforcement of his rules. He must make a right use of punishments and rewards, he must cultivate the habit of obedience, and his personal example must be an exact embodiment of his rules and precepts. He will also utilise play, gymnastics, drill and the whole school routine, as aids to his moral teaching. This branch of the work is more fully dealt with in the chapter on *Discipline.*

2. **The Cultivation of the Feelings as an aid to Moral Training.** The object here is to develop the higher feelings, to check some of the lower, and to refine others; to make the moral feelings sensitive, so that they may quickly respond to a stimulus. This will be done by example more than precept, by showing the feeling rather than by talking about it. The talking is advisable if it rests on a vitalised example. Wrong-doing must pain the teacher, and the children must see it. If right feelings exist between teacher and taught, their sympathy and respect will make them share his sorrow, and impel them to avoid wrong-doing. On the other hand, he must recognise with appreciative warmth the display of any virtue. All feeling is contagious, and it is this life and warmth which will lend force to his teaching.

The *social position* of the child will afford an abundance

of opportunities for his moral training. The development of the social idea, the influence of companionship, the force of public opinion and school opinion, his social relationships, and the social influences generally which surround him, are all important factors to be observed and utilised by the teacher. Meantime, it is sufficient to point out that this part of the work is more fully dealt with in the chapter on *The Social Feelings*.

The influence of *Music* must not be overlooked. It is discipline in a most enjoyable form. Class singing *trains the will*, and *develops the idea of social unity* at the same time. Some forms educe the *moral virtues* and the nobler characteristics of the mind. Music often has great power over the mind. It soothes, animates, encourages and controls. School songs afford one of the chief means of diffusing through the people *natural sentiments*. National songs encourage bravery, patriotism, loyalty, industry and religion.

3. Moral Judgment as an aid to Moral Training. The teacher's aim is to form the moral judgment, to make it sound and exact, and to refine it. For this purpose the children must be taught to *observe and to understand the feelings of others*. Remember morality deals with motives and intentions as well as actions, hence the comparing of actions is not sufficient; the motive also must be included. In moral training it is not enough to know that a man is just or generous, but *why* he is so. The conduct of his schoolfellows will afford many opportunities for training the moral judgment, and *the observation of his own conduct* will assist. The teacher's function here is to point out the probable or inevitable consequences of any particular action, and to make these thoroughly clear. *The Bible*, *History* and *Fiction*, will afford varied examples, and carry the child's mind into a wider field; will evoke the moral feelings and give practice to the judgment. Such instruction is said to be education in the true moral sense, since it attracts or repels the feelings, as well as enlightens the judgment.

4. **Ethical Exposition as an aid to Moral Training.** Formal lessons on morality are *an aid*, but an aid only. There is a strong intellectual element in the moral judgment which needs cultivation, and which is cultivated by these lessons. *Their weakness is said to be their inability to call the feelings into exercise*, but this is only relatively true sometimes. They are naturally weaker in this respect than concrete examples, and will depend for their success on such factors as variety, temperament and treatment. Literature itself often evokes warm feeling, and when its story is vocalised and vitalised by a skilful and sympathetic teacher, some exercise at least is found for the feelings. But apart from this, such lessons are advisable and even necessary, and the existence of such classes as teachers and preachers is substantial evidence of this fact. They are necessary as *correctives to custom*, which is not always infallible. We are apt to think certain things correct because custom allows them, and this, morally, may be a dangerous position. In a small community, sympathy operates through thought as well as feeling. We are too apt to think like those around us. Exposition may be necessary to correct this. New schools of thought are ever arising to correct customary modes of thought and action, and it will sometimes be the teacher's province to do this in the little world of his school. Moreover, such teaching adds the necessary element of *variety*, which is necessary to maintain interest. But above all, such lessons are a valuable aid for building up the *conscience*. The contemplation of noble characters appeals to that sensibility on which tenderness of conscience depends. The drama, history, and literature, "bring the moral idea before us in embodied form, and compel our moral approval." Furthermore, "literature is the medium through which all that part of your inner life finds expression, which defies scientific formulation. It gives a voice to that within us which would otherwise remain dumb, and fixity to what would otherwise remain evanescent."

Summary.

Functions of Moral Sentiment.

1. It deals with voluntary human action—conduct.
2. It considers motive or intention.
3. Its judgment is really on character.

Nature of the Moral Sentiment.

1. **Moral Obligation.**
   (a) A feeling of "oughtness" is the *essential condition of the Moral Sentiment*, and is known as the categoric imperative.
   (b) The approval of right conduct impels to like action—*the true Moral Sentiment.*
   (c) The notion of "oughtness" is ultimate and unanalysable.
   (d) *Intuitionists* consider the feeling of moral obligation arises from the knowledge of an external law of right.
   (e) *Utilitarians* explain it as the result of custom and experiences of utility.

2. **Moral Law** distinguished from civil law.

Moral.	Civil.
(a) Self-imposed.	(a) Externally imposed.
(b) Universal	(b) Local.
(c) The greater—includes civil. Demands a social maximum.	(c) The less—not so wide as moral. Demands a social minimum.
(d) Deals with motives or intentions.	(d) Deals with actions
(e) Is an ideal.	(e) Is always more or less imperfect

Definition of the Moral Sentiment.—*The sum total of all the rules of conduct which are enforced by a feeling of Moral Obligation.*

3. **The Moral Standard.**
   (a) Different standards are set up from time to time; *e.g.*, *Custom, Positive Law.*
   (b) This results in local standards.
   (c) The final standard is found by comparison—this is *conscience.*

4. **Growth of Moral Sentiment.**
   (a) Origin—in authority.
   (b) Nature—at first negative.
   (c) It is extended by observation and experience.
   Definition—the Moral Instinct.—*Pleasure in the good and pain in the bad.*
   (d) An association between certain feelings and acts is formed.
   (e) The imagination is involved.
   (f) Discrimination and comparison are necessary.
   (g) These (f) involve a judgment—moral.
   (h) The growth of intelligence in general and of reflection in particular assists.

(*i*) It is refined by sympathy.

Definition—of Conscience.—*The feeling which makes us wish to do right.*

(*j*) It is strengthened by the growing sense of duty.

(*k*) And by the will—*pure will the essence of Morality.*

(*l*) A self-judging conscience is the final step.

Definitions.

(1) *Moral Obligation is the feeling of personal subjection to the Moral Law.*

(2) *When a cognition of right is accompanied by an impulse to action we have the true Moral Sentiment.*

(3) *Conscience is "a pure and disinterested attachment to duty."* (Sully.)

5. Moral Education.

(*a*) Utilise discipline as an aid.

(*b*) Cultivate the feelings.

(*c*) Train the moral judgment.

(*d*) Give ethical exposition.

(*e*) Allow for temperament and disposition.

QUESTIONS.

1.—Explain as to an advanced class the nature and functions of conscience. Give different designations for it and show its relations to intellect, feeling and will. (E.D.)

2.—State precisely how you would explain the nature of conscience, (*a*) to a Standard I. class, (*b*) to a Standard VI. class. What definitions would you adopt in each case? Give reasons for both definitions. (E.D.)

3.—Explain the evil effects of making parental and tutorial approbation and disapprobation the test and rule of moral training. (E.D.)

4.—It is said that moral training implies sympathy between parent (or teacher) and child. Inquire into the meaning of this statement and compare the general moral effect of a severe discipline; *i.e.*, one relying mainly on fear of punishment, with one which appeals to personal affection and sympathy. (L.U.)

5.—Illustrate the bearings of a study of the principles of psychology on moral education. (C.P.)

CHAPTER XXI.

THE WILL.

Examination of an Example of an Act of Willing.

I feel cold and move to the fire. Let us carefully examine this apparently simple, every-day sort of action. *I feel cold, i.e., I have a presentation of a cold state*, and I recognise that that cold state is connected with myself. The fact that *I approach the fire* implies, among other things, that *I see the fire*. So I have another presented state—*the appearance of the fire*. But with this presented state (the appearance of the fire) is associated *re-presentations* (memories) *of former warm states* caused by my having been near fires. Now, the memory of former warmth is contrasted with the present feeling of cold, or, in more technical language, *the re-presented warm state is contrasted with the presented cold state.* It is out of this contrast that the *desire* to realise once more the warm state arises. The process thus far may be graphically represented as follows:—
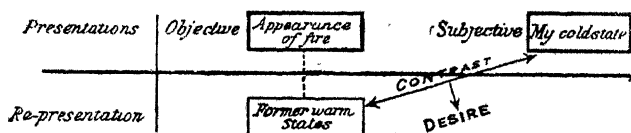
FIG. 64.

The desire calls up the re-presentation of means for its satisfaction, and unconsciously I re-present in my mind the kind of action necessary for the attainment of the warmth. I *believe* that these actions will lead to the desired result, and my mind *wills* the body to move certain sets of muscles, which carry me to the fire.

Definitions of Will.

1. "The term will includes all active operations of the

mind. By active operations are meant not only external actions or movements, but also internal acts of mental concentration, together with certain preliminary stages of action as desiring a thing, reflecting or deliberating about an action and resolving to do a thing." (Sully.)

2. To will is to desire something believed to be attainable.

Definitions of Desire.

1. "Desire is the more elementary phenomenon which underlies and precedes volition." (Sully.)

2. Desire is "a state of craving which compels us to seek the realisation of some delight which is present to the mind."

Analysis of Desire.

The student will be easily able to follow this analysis in the light of the example at the beginning of the chapter.

I. Intellectual Elements.

1. *Presentative Elements.*
   (*a*) The appearance of the fire.
   (*b*) My feeling cold.
2. *Representative Elements.*
   (*a*) *Result of Reproductive Imagination*—idea of warmth of former fires.
   [(*b*) *Result of Constructive Imagination*—*e.g.*, some one describes a play to me, and I desire to go to see it.]

II. Emotional Element.

The idea of warmth of previous fires was pleasurable.

III. Volitional Elements.

(*a*) *Mental Activity*—concentration of the attention on the representative elements.
(*b*) *Bodily Activity*—here desire begins to become volition.

Analysis of the Process of a Voluntary Action.

I. Desire—(analysed above).
II. Re-presentation of the movement necessary to accomplish the desire.
III. Belief that the re-presented movement will accomplish the desire.
IV. The actual carrying out of the movement which has been re-presented in idea.

Relation of Desire to Will.

Desire is the basis of willing, but whether the desire is to pass into volition depends on a belief in the power to attain the object desired. Whether it is attainable or not is immaterial. The essential condition is that we should believe it to be attainable. A boy may desire a prize, but may make no effort to obtain it because he thinks it unattainable. But if on reflection he believes it to be attainable he works for the prize, and his state of desire becomes a state of volition.

Relation of Desire to Feeling.

Desire is primarily a state of feeling, for it is a state of want or craving. There must be an element of feeling connected with the re-presented state, otherwise no desire would arise.

Relation of Desire to Intellect.

The intellect plays an important part in desire. In desire it is essential that the mind should distinctly recall and imagine the thing desired, hence we cannot desire a thing of which we have no idea. A child's desires are directed to immediate gratifications because of a lack of imagination and experience, which are necessary to picture out new associations. As his intelligence grows new desires arise, but the nature and number of his desires will always depend on the strength of his representative and imaginative powers.

The above is an attempt to outline the theory of the origin of the will as expounded by Sully. It may be convenient here to briefly notice some other states, etc., intimately connected with the will.

Motive is *the* desire which precedes the volition.

Impulse—"Those innate promptings of activity in which there is no clear representation of a pleasure, and consequently no distinct desire." (Sully.)

Appetite—a term used to denote the recurring wants of the animal system.

Inclination shows itself in the frequent recurrence of similar desires; it is habituated desire.

MOVEMENTS AND THE WILL.

The growth and development of the will can be measured by the type of movement involved. Movements are either **Voluntary** or **Involuntary**; that is, they either involve an act of conscious willing, or they do not.

The **Involuntary** are the first to appear, and include those *Impulsive*, *Reflex* and *Instinctive* movements, which are the characteristics of infancy and early childhood. The tendency to these movements is inherited, but their powers and their relations to the bodily wants are learnt only by experience. We recognise the first signs of the will in these early muscular movements, and at first they are the only indication we have of its existence.

Voluntary movements embrace the higher forms, such as *Sensory*, *Imitative* and *Deliberative Movements.*

1. **Impulsive or Random Movements.** These include those aimless, purposeless kinds, such as convulsive movements, grimaces and stretchings. Bain considers that they arise from the natural spontaneity of the child. They are of some importance educationally, for they are among the first steps towards voluntary movement.

2. **Reflex Movements.** If a bright light be brought too near the eye of a child, the pupil contracts; a loud noise makes the child jump; a very bitter taste may make him retch; a cold dip makes him gasp and cry. Place your finger in the hand of a very young infant, and his fingers close around yours. All these movements are muscular contractions, and observation shows that they are symmetrical. The child stretches or bends both arms alike; he winks with "simultaneity and similarity" of both eyelids, and so on. The brain takes no part in these movements, which are known as reflex actions. They contain no elements of desire.

3. **Instinctive Movements.** These may be distinguished from random and reflex movements by *their greater complexity.* They are all characterised by their *perfect co-ordination* and their *consecutive nature*, as may be seen

in the acts of sucking, cooing, pouting and blinking. Like the previous classes, *they make no demand on the brain*, but unlike the former, *they are accompanied by a vague form of desire;* hence they are nearer to the voluntary class than the reflex. Their importance in the growth of the will is very great.

4. **Sensory Movements.** These arise from the stimulation of the sense organs. A pretty-coloured toy delights the child, and he makes efforts to get possession of it. If he succeeds, and succeeds often enough, the grasping and handling of the toy brings the muscular sense into play, and this helps him, by repeated trials, to separate the movement from the other elements, and to associate it with a particular kind of pleasure—the handling or playing with the toy—and a desire for the possession of the toy arises, which leads to a **voluntary movement.**

5. **Imitative Movements.** An imitative movement is one which is prompted by an impulse which is excited by the sight of the movement in others. Children are ever imitating the actions of those around them, and they do so under the influence of impulse. Success does not come at first, because some *experience* of movements is necessary. Their first efforts are mechanical, but later on they become more conscious, and lead up to voluntary movement.

A person makes a movement, which is imitated by the child. Take the moving of the arms as an example. Now before the child can imitate this movement, he must first have had some *experience* of movement, and he must know how to utilise this experience for the particular movement in question. The acquisition of this capability involves a number of elements which will be set forth directly, but here it will be sufficient to note several essential steps.

We must first note the effect of the child's natural spontaneity, which, among other movements, has caused him to raise his arms at different times. He sees his own arm raised, and these repeated appearances leave behind an image in the mind. An association is thus set

up. By-and-by he sees some one else raise his arms. The image in the mind is recalled, and he notes the coincidence. The recognition of the coincidences gives him pleasure. *A motive is thus supplied to make him act.* Under its influence he raises his arms, and an imitative movement is the result. Repetition brings facility in the performance of the action, and the first awkward efforts give place to the perfected movement.

But the influence of **Heredity** has also to be considered. The first imitative actions are said to show themselves before the fourth month. Now we have shown that an association between the movement and the sight of the movement is essential. A child four months old could hardly form this association. Hence it is argued that the association to some extent at least must be inherited. Others argue that the association itself is not inherited, but that a *tendency* to form this special association more readily than other associations is inherited. Probably the latter view is correct, which holds that the child inherits a *tendency* to form associations of one kind more readily than those of another kind. But whether there is an instinctive element or not, we know that *constitution* and *disposition* cause the strength of the imitative impulse to vary in children. A child of energetic temperament is more imitative than one of feeble constitution or sluggish temperament.

This naturally leads us on to consider the element of **Feeling** in imitation. Movement means activity, and suitable activity brings *pleasure*. The child's imitative impulse is nowhere so freely stimulated as in play, and play is prompted by feeling for its own gratification. When imitation ceases to be mechanical, it is prompted by *Desire*, which is a form of feeling. The child desires to do what others do, and this involves a feeling of *Sympathy*. Where *Affection* or *Respect* is felt, we particularly desire to be like the loved or respected one, and it is this close connection between imitation and sympathy which makes example such an important factor in moral training. The

strength of the impulse is also largely influenced by *Temperament.* Some children are more adaptive than others, and readily fall into the prescribed line of conduct. Such children are more imitative than those of more independent character. But perhaps the chief cause of an imitative disposition is the child's *feeling of weakness,* which is largely due to ignorance.

This leads us on to the **Intellectual** element in imitation. We have already referred to the function of *association,* but the strength of the imitative impulse depends, among other things, very largely upon the closeness of *Attention.* Successful imitation implies a close attention to the particular movement, both when performed by the child himself and when performed by others. Repetition brings facility in imitation, but the first repetitions at least demand a certain force of attention. The representative element is also very important. Imitation, in its later stages at least, is purposed movement, and this makes a demand on the *Imagination.* To imitate a movement there must be the power to recall its image, to represent to the mind distinctly how the muscles involved must act, and for this purpose *Memory* also is necessary. As a rule, the first purposely imitated movements are those of expression, and their performance shows that imitation has now reached the stage of volition. The first movements were more or less unconscious; these are both conscious and voluntary. The first movements were due to *Ignorance,* for intellect and will were both weak. As neither intellect nor will guided the child, his imitative impulse prompted him to act like others. The transition from such movements to purposed ones denotes an appreciable growth in volitional power.

It may be necessary to note that these purposed imitative movements are sometimes called **Ideo-Motor,** because the recalling of the image or idea of the movement is immediately followed by the performance of it.

Imitation implies **Example,** for there can be no imitation without something to imitate, without an example to

copy. Example, sympathy and imitation are closely linked together. Several children learning any particular movement together (swimming, drill, etc.) will learn much more rapidly than when isolated. Example is a potent force at all times, and especially in play. New modes of movement are quickly learned, and the child's range of action is appreciably extended. But even example is dependent on *Temperament*. It is less operative with children of an independent nature, who sometimes show that independence by original modes of action. Recognising this, the teacher should act as an example with some, and as a controlling guide with others.

6. **Higher Forms of Movement.** The development of ideo-motor movements leads gradually to those more perfect forms of voluntary movement which mark the higher stages of volition. The child learns from experience to check that general impulse to action which arises from the spontaneity of the nervous system, and to concentrate it on some clearly conceived purposed act.

But progress is not always easy. It involves conflict by the way. In learning any new movement, as writing, playing the piano, knitting, etc., acquired movements have to be modified or overcome before the new movements pass into possession. There is thus destruction as well as construction. Childhood is the time for these efforts, since the muscles are plastic and the active impulse strong. Individual movements already acquired are then combined to form new and more complex movements. The learning of new vocables, the proper holding of a pen, and the spinning of a top, are cases in point. In many of these combined movements the rate of progress will not only depend on *Example*, *Imitation* and *Exercise*, but also on *the degree of discriminative delicacy* possessed by the organs concerned. The possession of natural endowment soon reveals itself by the greater ease and rapidity of acquisition.

The mind becomes stocked with motor images, which, by association, embrace a wide field of concepts. The child

gradually becomes independent of the concrete example. The sight of the action is no longer necessary. Sensation gives place to imagination. The movement has a mental origin. For instance, the child is no longer dependent on a sight of the kitten; he thinks of it and seeks it. The child has now reached the stage of pure voluntary action, and his movements are henceforth, with growing facility, under the control of his wishes and purposes.

SOME ASPECTS OF THE WILL.

I. **Deliberation and Choice.** Our desires or impulses may conflict and produce a state of hesitation. *Each of the conflicting impulses pleads its own cause to the Mind, and the process by which this is done is called Deliberation.* A state of *Doubt* is produced. Action is deferred while the mind reflects. Both will and interest are thus brought into play. Deliberation is rendered necessary, because the *pros* and *cons* cannot all be presented to the mind at the same moment, and time is thus afforded for consideration as each arises in consciousness. Deliberation is born of experience. Most of us know something of the evils of hastiness—a common characteristic of childhood and youth. We learn to suspend our judgments, so that our desires when made may tend to our well-being. But the power to check impulse and to form a disposition to deliberate is a slow process; and this need hardly be wondered at, for such a power indicates a fully developed will and a habit of circumspection. Most children are too impulsive to be circumspect, and the same fact is true more or less of many adults.

After Deliberation the Judgment makes a decision and we get an act of Choice, which is the highest expression of the will.

II. **Resolution and Perseverance.** A scholar may resolve on a certain course of action, *e.g.*, to compete for a prize. Before coming to this determination he thinks about the matter, recognises the fact that he will have to work

hard, and practise some self-denial. These and other points are represented in idea and thought out. This shows that the preliminary stage in resolution involves *Imagination* and *Reflection*. The reflective or deliberative attitude involves a *Judgment*, and a decision or *Choice* is made. The determination is now fixed, and he decides to begin at the earliest opportunity, which may be near or remote. The period between resolution and execution is painful from its uncertainty, and this is a reason for an occasional stimulation of the resolution. New motives arise in the form of incentives to pleasure, and a state of conflict ensues, which calls for a renewal of the resolution. Hence, in the language of Bain, **Resolution** may be defined as **the preliminary volition for ascertaining when to enter upon a series of actions necessarily deferred.**

Resolution is accompanied by **Firmness** and **Perseverance.** The interval between resolution and execution demands the existence of both, or there will be no execution. *They reveal the strength and stability of the resolution.* They are essential for steady application and continued effort. Their absence indicates a weak will.

III. **Control of the Feelings by the Will.** Perfect self-control involves a perfect will. But as perfect wills are by no means common, especially among children, the question of self-control is generally one of degree only. The teacher's task is to raise the degree as near perfection as possible. The control of feeling is very difficult to most children. Few, if any, can do it at all times. Repression, whether self-imposed or otherwise, is not necessarily self-control. *The test is whether a lower impulse is held in check by a higher one. Impulse must be subjected to principle.*

The growth of control may be observed in a child. At first he is a mere bundle of appetites. Self and immediate gratification is his policy. Any check produces an outburst of feeling. Meantime his education is proceeding, and he learns much from experience. He begins to learn that there are principles of conduct which often conflict with

his impulses, but which have nevertheless to be considered. In the first struggles the victory invariably rests with impulse. There is reflection, but in too weak a state for the mastery of impulse. But the social feelings are developing, and soon there comes a time when the higher feeling prevails. He ceases to beat his drum because his mother has a headache. It is his first victory, but it is by no means his hardest or greatest. Many severe struggles are before him. Defeat is probably frequent, but no longer general. The impulse to play is strong and exacting, but it is put aside at times for work. The sweets and toys are now sometimes shared with others. Impulse is yielding slowly to principle.

This marks the general limit for young children, but further developments may be observed in the older ones. The boy will still consume unlimited cake, neglect his lessons, or give way to fits of temper. But other considerations are gradually forcing themselves upon him. He sees that gluttony impairs his health, laziness his reputation, and temper his comfort. He learns that health, reputation, comfort, etc., are desirable. His health is important, because he wants to shine in the school games; his lessons receive attention, because he wishes to please his teacher, parents, or raise his class position.

The average will has reached the limit of control for school life at this stage. Riper years will show the necessity for *the subordination of his own particular interests to the common good.* The law will see that this is done in many cases, but there is always a wide field lying outside the legal scope, in which this highest form of self-control may be practised. We recognise this especially in the well-bred man, who restrains all feelings and their manifestations which are likely to hurt others.

IV. **The Control of the Thoughts by the Will.** Outwardly, the will manifests itself in actions and deeds; inwardly, it controls the thoughts. The flitting of the attention is a common characteristic of children, and the

checking of it for the purpose of concentration demands a special effort of the will. This effort often shows itself by *bodily manifestations*. The boy frowns or knits his brows over a problem; another is manifestly restless and uncomfortable in his efforts at voluntary attention. *Interest* has to supply in some form a strong motive to attention.

We may determine the train of ideas that shall be represented to the mind by raising them, by means of attention, from the sub-conscious region to the conscious one. The control of the thoughts is also shown in the mental process called *reflection*. When we reflect on a subject, or about an object, we voluntarily turn the train of ideas upon that subject or object. It is common experience also that we may voluntarily produce desired states of feeling and mental states (gaiety, gravity, etc.) by a proper concentration or diversion of thought.

V. THE WILL AND APPERCEPTION.

A volition may be defined as the desire for something, plus the conviction of its attainability. When the desired object is attained a feeling of pleasure is experienced, and ideas or images of the volition and the connected pleasurable feelings are left in consciousness. The memory-image of the volition tends to reproduce the pleasurable feelings, and such a will-image, created by a single act, is called a *single volition*.

By the law of similarity, when a new and similar volition arises in the mind, the first will-image is recalled, and at once proceeds to test the new volition. The recognition of similarity between the two gives rise to another feeling of pleasure, and the result is that the new one is strengthened by the old one, and the two are fused into one volition, which is now known as a *universal volition*.

VI. HABIT AS MEMORY OF THE WILL.

Habit bears the same relation to the Will as Memory does to the Intellect. The child wills to do a certain action;

each repetition of that action necessitates a like volition. If his will (like the impressions of memory) appears the same under the same renewed causes, and if less and less effort is involved in the reproduction, he is then forming that habitude of the will which Herbart calls the *Memory of the Will.*

DEVELOPMENT OF THE WILL.

It will be convenient here to make a *resumé* of much of the earlier portions of this chapter. Our first movements are *Random and Reflex Acts.* The *Instinctive Movements* are a distinct advance on these, for they are accompanied by feeling and a vague form of desire. The value of instinctive movements in the growth of the will lies in the check they impose on reflex movements. They also represent that "untaught ability" which leads the young animal to perform those actions which are essential to its existence. Instinctive movements are the will of the race exemplified in the will of the individual. Impulsive or random movements are made blindly, regardless of the attainability of the object desired. But there are certain special impulses towards definite lines of action which we call *Appetites.* The uneasy sensation which characterises an appetite prompts to its satisfaction, and this prompting is akin to desire.

The introduction of an *Intellectual Element* produces desire proper, and makes it independent of the organic wants of the body. When the child believes the desired object is attainable, his desire passes into *Volition.* The strength of the volition depends on the nature of the desire, and this is in turn dependent on the strength of the child's power of *Representation.* Hence the growth of will implies the growth of intellect.

The presence of appetite and desire as elements in the development of the will has already indicated **Feeling** as an essential factor. Strong feeling is necessary for a strong will. Associations are set up between feeling and move-

ment, and even indifferent sensations may give rise to action when associated with other sensations which are pleasurable or painful. Feeling also enters largely into *Temperament* and *Disposition*, which thus become determining factors in will by contributing to its strength or weakness. Thus we find volition strong in the choleric and energetic, weak very often in the sentimental and melancholic, and either one or the other in the phlegmatic.

The great field of the ideo-motor class of movements is the *Imitative*. The imitative impulse leads to the incessant repetition of these movements among children, and the growth of will is thus correspondingly rapid. They supply very largely that great field for **Exercise** and **Example,** which are so necessary for the correction, acquisition and perfection of movements.

The development of ideo-motor movements leads gradually to those more perfect forms of voluntary movement which mark the higher stages of volition. The child's mind becomes stocked with motor images, and with the constant assistance of the other elements he is finally enabled to reach the stage of **pure voluntary action.** These higher stages are marked by **Deliberation,** by the power to form **Plans,** to judge and to **choose**; by **Resolution,** perseverance and firmness; and by more or less power to **control both Feeling and Thought.**

TRAINING OF THE WILL.

1. **Its Importance.** Training should follow the order of growth and development, and should proceed from the simple to the complex. For this purpose the teacher will need to choose and grade the means he proposes to employ. These means will embrace *instruction*, *exercise*, *commands*, *habit*, *disposition*, *companionship* and *discipline* generally. His task will include a new and suitable supply of motives, and these will be limited and defined by the stage of development reached. The importance of the task cannot be over-estimated. Preyer says that the human will is the greatest power on earth. It is man's will too that shapes his destiny, for we are, very largely, what we will

to be. The task is not easy, for it is only in the early stages that the will is pliable. If faults of will are allowed to develop, the whole course of education is severely handicapped. Hence the necessity for skill, attention and patience in the first efforts.

2. **Instruction and Exercise.** It will be remembered that the earliest movements—the impulsive, reflex and instinctive —come into play without any antecedent ideas, but that the imitative involve an intellectual element. The child's first voluntary movements are imitative or ideo-motor. Volitional growth thus depends on the stock of ideas of movement. But these ideas are based on percepts, which have their origin in *sensations*. This is an important item in the fashioning of the teacher's work in these first stages. He must make good use of the imitative impulse in the school exercises, so that the child's stock of motor ideas may be enlarged. The curriculum should thus embrace such subjects as will supply experience of those sensations and percepts on which these ideas are based. Kindergarten, manual instruction, those advanced kindergarten exercises which are embraced in hand and eye training, games, gymnastics, drill, singing, object lessons, writing, drawing, reading and recitation, will afford abundant opportunities for such exercises, and will supply that interesting variety which is essential for mental and bodily vigour as conditions of a strong will. By carefully grading his exercises, the teacher is not only using the child's love of activity, but he is doing it in an orderly and educative way. He is showing, guiding, restraining, exhorting and encouraging in turn, and is thus training the child in a wide field of movement. Sense knowledge is being acquired, ideas are being stored and action is being perfected; *i.e.*, the will is being strengthened. The ideal to be aimed at is *perfect action; action that is adequate, yet economical of force.*

3. **Discipline.** Efficient instruction and exercise demand good discipline. But *over-government* is not good discipline, and the modern tendency is to recognise this fact. This subject will be dealt with in greater detail in a subsequent chapter, so that only a few essentials will be mentioned here. Briefly, prohibitions and commands should only be laid down and enforced in so far as they are absolutely necessary. To direct a child's will we must control his motor ideas. Control, in its first stages at least, is always

more or less irksome. Concentration is weak in young children, so that the necessary attention is not paid to the copy movements. These weaknesses have to be overcome, but the necessary discipline must be reasonable. If the motive relied on does not induce the necessary effort, try another. The love of approbation, the desire to please, class ambition, self-respect, or some kindred motive, will be found effective, the choice depending largely on the child's temperament and disposition. Training involves not only *Instruction* and *Exercise*, but *Authority* and *Affection*, and when the former is based on the latter it rarely, if ever, fails. Within certain limits the *Discipline of Consequences* may also be allowed to operate, and these forces combined are the most effective means at the teacher's disposal.

4. **Habit.** Every perfect action indicates a habit, hence the necessity for care and thoroughness in the motor exercises. If the teacher will ensure care and accuracy in the *first* movements, the principle of habit will finish the task. The teacher's special work is to supply suitable opportunities within reasonable limits.

5. **Disposition.** In his training the teacher will have need to regard the disposition of each child. This will demand plasticity in his methods and discipline. With reasonable discipline the child's natural disposition comes out in his movements. This is especially observable in his play among his fellows. Ten minutes' observation in the playground is worth ten days in the school. Companionship is thus a valuable aid to the teacher in measuring up his work, for it not only reveals the natural disposition, but affords unlimited scope for imitative movements. In this way much progress is made in the training of the will without the teacher's aid. The rules of the game and the force of school opinion are voluntarily submitted to, and the child learns a good lesson of self-control.

6. **Self-education.** With growing intelligence the child comes more under the sway of reason. Discipline is recognised as a necessity, and the reasonable nature of a command is admitted. He is now ready to make an effort to stand alone, and to act as a free agent. Discipline may still have to intervene occasionally, but its proper place now is in the background. The boy must be encouraged to deliberate and reflect, to practise self-control and to choose the better part, and for this a certain amount of freedom

is absolutely necessary. Where assistance is wanted then discipline must step forward and present a high motive. Recurring successes will breed self-confidence, both in his purposes and his principles. This should be recognised and appreciated, and should be allowed the greatest possible freedom.

SOME DEFECTS OF THE WILL IN CHILDREN.

I. **Obstinacy.** The training of the will culminates in self-control, but self-control is often intermittent. It may be temporarily deposed by faults of the will, chief among which is obstinacy. Firmness is a desirable attribute of the will, but too much firmness spells obstinacy. Obstinacy in adults is often the result of a judgment which fails to determine the proper time, place and degree of firmness required. It is a characteristic of older people, whose lives run in a narrow groove, and whose mental habits are crystallised. Now, children are very susceptible to new impressions; their minds are plastic and open, and their ignorance and undeveloped intellects are unfavourable to that rigidity of mental habit which marks *obstinacy of Judgment.*

But there is an *obstinacy of the Will* as well as of the judgment, and teachers are far more concerned with this type than with the other. Most teachers are acquainted with the child who will neither be advised nor persuaded, who is self-assertive, aggressively independent and even defiant at times. Such children are not uncommon in our schools, and they afford the teacher ample opportunities for distinguishing between firmness and obstinacy, a difference that has been aptly described by some one who said firmness is a *strong will* and obstinacy a *strong won't.*

The teacher must not confound *Mistaken Obstinacy* with the real article. The natural obtuseness which keeps a child dumb when questioned, the lack of intellect which handicaps him in the right interpretation of work and rule, the consciousness of his own stupidity, the physical weakness which makes him shrink from anticipated or actual

censure, the paralysing effect of fear upon the thoughts and actions, all of these at times may simulate the appearance of obstinacy. But mistaken obstinacy is not solely confined to such causes. Obstinacy of judgment, where it exists among children, may often be classed as mistaken. A command may carry with it to the child an idea of injury or wrong. He declines to act from a sense of right, and is supported by a feeling of firmness which is mistaken for obstinacy.

The *treatment of obstinacy* must vary according to its cause. In *Mistaken Obstinacy* there is no defiance, but either constitutional or mental defects, and all punishment is unwise and unjust. The child does not require correction, but assistance; not severity, but sympathetic patience.

The *treatment of Real Obstinacy* presents greater difficulties. A harsh discipline may produce it. Here the fault lies with the teacher, and the remedy with him also. Where it is only occasional, as in the case of wounded vanity, care must be exercised to prevent it slipping into perverseness. The difficulty is greater still in *Vicious Obstinacy*. This proclaims a low moral tone, or a strong development of the anti-social feelings. In such a case do not let the boy think you mistrust him. Preserve a calm exterior, and exclude personal motives from your discipline. Avoid a contest if possible, but if the boy will have it, then you *must* win. Meantime the sympathy of his class-fellows should be enlisted against him, as their support and approval are appreciable elements in the case. Thus far there will be little disagreement as to the treatment, but the point of cleavage is reached over the question of corporal punishment. Many consider such a case, when it is extreme, a fit one for such punishment, but even here separation and reflection may render it unnecessary. Having won, victory should be followed by kindness and gravity. In incorrigible cases, the less of two evils must be chosen, and the boy must be expelled.

II. **Querulousness.** This is a home-manufactured fault

of the temper, generally produced by over-fond mothers. An excess of emotion is displayed every time any little check or misfortune overtakes the child. As a consequence the child looks forward to this display, and when it is denied, complains, repines, and becomes discontented. But it has its riper forms. The person with a grievance, who is habitually complaining, and the fretful, are querulous in temper. The temper may even affect a whole tribe or nation, as the chronic murmurings of the Israelites show.

A querulous temper indicates a feeble will which wants bracing. The best medium is play, which supplies a stock of little knocks, bruises and disappointments. These the child should be taught to bear with fortitude. The example of the more hardy and uncomplaining boys should be pointed out, and he should be exhorted to imitate them. Real suffering should be met with a ready sympathy, but trivial and fancied ills should be good-naturedly ignored. The influence of his fellows, backed by judicious treatment and proper example in the teacher, will steadily destroy this feebleness of the will by creating something stronger and better in its place.

III. **Violence.** An exuberance of energy and animal spirits, a consciousness of muscular strength, a love of power, a desire for fame, distinction, are elements which may lead to an outburst of violence. In such cases the violence of temper or action is not always an unmixed evil. It is a hopeful fault, because good qualities may underlie it. Just as obstinacy is in some cases an excrescence of firmness, so it has been asserted that some forms of violence are excrescences of that frankness and decision which it is an object of education to cherish. It may even be joined with an earnest and generous temper. Sometimes it is due to a faulty memory, as when it forgets the consideration due to others. But it is more often the result of uncontrolled anger, and the desire to inflict injury on others. This is violence in its worst form, and it must be carefully dis-

tinguished from those impulsive forms mentioned above, which are generally free from malice.

The *treatment* will vary with the kind, and in every case it should deal with the cause. For the treatment of the *malicious* and *furious forms*, the student is referred to the chapter on "Egoistic Feelings" (p. 222). In the *impulsive forms*, the teacher's work is not only to check the violence, but to divert the underlying force into other channels. The object is not to crush, but to restrain and guide. A word or a look is often enough to check an impulsive outbreak; an appeal to the offender's better nature will sometimes set the moral reason in motion, and prevent any further display. *Force must not be used except in extreme cases.* To oppose violence by sheer force is like pouring oil on fire—the blaze will be bigger. The teacher should rather aim to make the violence non-effective. He must see that it does not succeed in its object, and he must do this with calmness and firmness. He will then have made a very good beginning. Time should be allowed for the excited feelings to settle. An appeal should then be made to the reason and the better feelings of the boy, but not too soon after the outburst. The most common mistake in school discipline in such cases is, that *the appeal follows too fast on the heels of correction.* Such feelings may not readily subside, and they often leave smouldering traces behind them. The too hurried appeal then acts merely as a fan, and a fresh blaze may be the result. Furthermore, the appeal should be *unadulterated with reproof*—another fact often overlooked by teachers.

IV. **Weak Will.** A weak will is generally marked by *weak intellect. There is no power of connected thought.* There may be a number of ideas, but they rarely form a train. The ideas, as they arise, unfortunately exist in a state of isolation, so that each tends to become an impulse of itself. This explains the *moral weakness* that usually accompanies a weak will, because, as Felix Adler points out, ideas of virtue are complex, and no one can illustrate

virtue on a high plane, unless he is capable of holding in mind long trains and complex groups of ideas. This lack of connectedness is one of the radical defects of weak wills.

Weak wills are also characterised by *indolence*, and this is due to the same cause—the lack of connectedness between ideas. This also explains the incapacity for sustained effort. *Attention, concentration* and *interest are lacking* for the same reason.

The moral deterioration which usually results from a weak will is partly explained by *defective imagination* and partly by *weakness of motive*. There is no power to vividly realise self; and as the feeling of shame depends on this, weak wills are generally accompanied by a deficiency of this emotion. This is the reason why severe punishments fail in such cases to act as deterrents.

The **teacher's aim** is to strengthen the will. He requires to give the necessary power to think connectedly. He wants to establish a closer connection between the ideas of the weakling. He wants to train him, so that he may reach an end by long and complex trains of means. He needs to strengthen attention, abstraction and imagination. In short, he must try to strengthen the intellect generally. He will also need to utilise the influence of the beautiful, and in the first stages, at least, this must be done in a concrete form. He will require to supply new motives, and to strengthen existing ones which have anything of good in them. He must also forbear to place the child in any situation which would put an undue strain on his will; in other words, he must not lead him into temptation. Trial should not be made before the necessary conflicting and higher motives have been created, and sufficiently strengthened for their work. For instance, the indolent, the inattentive, the volatile, should not be left to unsupervised work before the habit of work and the sense of duty are more or less formed.

The **means** for carrying out such a course of training must be both easily available and specially suitable. The

subjects chosen must fulfil certain essential conditions, and especially must they be interesting, so as to maintain attention and concentration.

These conditions are met by such subjects as *Kindergarten*, *Suitable Occupations*, *Hand and Eye Training*, and especially by *Manual Training*. Manual training is interesting and concrete. It appeals to the love of activity, and supplies opportunities for development which a mediocre intellect may deny. At the same time it helps to develop what intellect there is. It consists of a series of actions which necessitate discrimination, supply continuous occupation, which from their variety maintain interest, and so ensure attention and concentration. The progressive stages of the work give rise to a series of connected ideas, and so combat the radical defect of a weak will. The pleasures of action, of creating, forming, perfecting an article of manufacture, supply that recurring stimulus which is necessary to conquer lethargy and vacillation. When the article is finished the pleasure of achievement is enjoyed, the memory of which is also pleasurable, and which thus acts as a stimulus for further efforts. In this way, through sustained tasks, tenacity of purpose is cultivated. The child begins to see the connection between means and ends, and is thus led to gradually appreciate the value of secondary ends. Work is the means, training the end. But work brings pleasure, skill, approbation, promotion and the consciousness of increased power. Thus other ends arise, the value and importance of which he learns to recognise. Meantime the habits of work and of connected thought are being formed. The relative values of the various ends gradually dawn upon him, and he thus learns to subordinate the less to the important among them. In this way he is steadily mastering the secrets of a strong will, and preparing himself to face his future with increased volitional power.

The general discipline of the school should be such as to assist in the work. The necessity for careful supervision

and freedom from temptation has already been referred to, and in addition, the school routine should be so modelled as to facilitate the formation of good habits. No opportunity should be given for the exercise of bad passions. These should be starved out. A series of suitable object lessons might be utilised to show the dangerous physical effects of over-indulgence of the appetites, and the great advantages derived from habits of temperance. The higher feelings should be cultivated, and art training in the form of drawing, good literature, good music, and so far as possible good pictures should be utilised. Manual training loses much of its force as a training subject, unless supported in this way. Meantime the teacher's own example should harmonise with his teaching, and he should make the fullest use possible of religious instruction. Such a line of treatment, followed with steadiness, patience and sympathy, will do much to limit the supply of the little Rubens turned out of our schools.

Summary.

Will. All active operations of the mind.

Desire. A state of craving compelling to the realisation of some delight.

Arises from a contrast of a presented with a re-presented state.

Is the basis of will.

Is a state of feeling.

Movements.

I. *Involuntary.*

1. Impulsive or random acts. } No desire.
2. Reflex acts. } No desire.
3. Instinctive acts—vague desire.

II. *Voluntary.*

1. Sensory movements. } Desire.
2. Imitative movements. } Desire.
3. Complex movements. } Desire.

Instinct is untaught ability—is inherited—is the will of the race.

Imitation is prompted by an impulse due to the sight of the movement in others.

Deliberation and Choice.

Deliberation. The process by which each conflicting impulse pleads its own cause to the mind.

Choice. The decision made by the judgment after deliberation.

Resolution and Perseverance.

Resolution. The preliminary volition for ascertaining when to enter upon a series of actions necessarily deferred. (Bain.)

Perseverance. This reveals the strength and stability of the resolution.

Control of the Feelings by the Will.

There is real control when a lower impulse is held in check by a higher one.

Control of the Thoughts by the Will.

1. We may determine the train of ideas that shall be represented to the mind by raising them by means of attention from the sub-conscious to the conscious region.
2. The control of the thoughts is also shown in the mental process called reflection.

Habit as Memory of the Will.

Habit bears the same relation to the will as memory does to the intellect.

Development of the Will.

1. Early movements are random, reflex and instinctive.
2. The instinctive are the highest of these, for they are accompanied by feeling and vague desire.
3. The appetites are forms of vague desires.
4. The imitative movements are very prevalent among children, and supply the necessary exercise and example for further growth. They are known as ideo-motor movements.
5. The child's mind, stocked with motor images, finally reaches the stage of pure voluntary action.

The Training of the Will.

1. Training should follow the order of growth.
2. It should proceed through instruction and exercise.
3. It should demand good discipline.
4. It should demand the formation of good habits.
5. It should study disposition.
6. It should encourage self-education.

Obstinacy. An abuse of firmness.

1. *Obstinacy of Judgment.* A rigidity of mental habit.
2. *Obstinacy of Will.* "A strong won't."

Weak Will.

Generally marked by a weak intellect, moral weakness, indolence and weakness of motive.

QUESTIONS.

1.—What practical counsels respecting the moral discipline of a school can you infer from speculations on the will and voluntary movement? (E.D.)

2.—Say by what sort of discipline and exercise the will may be trained in school. (E.D.)

3.—"Only by doing can a child attain strength of will, and only by successful doing." (Rencke.) Consider what psychological justification there is for this dictum, and discuss its value as a practical maxim in education. (L.U.)

4.—How may the training of the will be both directly and indirectly developed at school? By what methods would you propose to carry it out systematically? (L.U.)

5.—In the education of character, how would you propose to deal with the two extremes of an excessively weak and an excessively strong will? (L.U.)

6.—Define imitation and estimate its educational value. Is it ever excessive in children from the educator's point of view? (L.U.)

7.—The will must be reached through the mind and heart. Discuss this, showing how you understand the relation of action to thought and feeling. (E.D.)

8.—With what powers and tendencies in the volitional side of mind is the teacher chiefly concerned? (E.D.)

9.—Explain, with examples, what is meant by a strong will and a weak will, and name some of the chief difficulties arising for the teacher under each head. (E.D.)

10.—Explain what is meant by the expression, "development of the will," apart from the formation of habits, and give examples of cases in which the teacher can assist it. (E.D.)

11.—Give examples of voluntary actions (1) not preceded by deliberation, (2) deliberate, but decided by feeling, (3) decided by effort of will. (E.D.)

12.—What are the chief forms that weakness of will takes in your pupils? How do you seek to correct this defect, (*a*) in ordinary class work, (*b*) in home work or private study? (C.P.)

13.—Define and give an illustration of the control of the thoughts. (C.P.)

14.—"If you would have any influence over man you must do more than merely talk to him; you must make him—make him so that it is impossible for him to will otherwise than you wish him to will." (Fichte.) Discuss this assertion from an educational point of view. (C.P.)

15.—What is meant by exercising a child's free will? Illustrate how this can be done consistently with the maintenance of a due measure of authority. (L.U.)

16.—Briefly explain and illustrate by an example instinctive movements. (C.P.)

17.—What is the proper province of an infant school in moulding a child's will. Illustrate your answer with instances occurring, or likely to occur, in school life. (E.D.)

18.—How (if at all) would you distinguish between self-will and a legitimate independence of will? Point out the bearings of your distinction on the method of moral education. (L.U.)

19.—Explain accurately the term instinct. Give examples of undesirable instinctive tendencies with which school discipline can deal, and propose methods of correction. (E.D.)

20.—Explain fully the steps by which a child learns to control his feelings and his thoughts. Estimate the influence of education in developing habits of self-control in the child. (C.P.)

21.—Write a short note on imitation, and show its bearing on the work of education. (C.P.)

22.—Trace the connection between the different forms of self-control. Show the importance of cultivating this habit in the education of the young. (E.D.)

23.—How would you deal with an obstinate child? (C.P.)

24.—Describe the main characteristics, positive and negative, of children's volitions, indicating the chief typical differences observable, and deducing principles for the early education of the will. (C.U.)

25.—Explain and comment on the following: "It is because natural constancy of will is not often found in children that discipline has so much to do." (Herbart.) (C.U.)

26.—Define the terms impulse, motive, self-control, and discuss them in relation to the formation of character. (C.U.)

27.—What do you understand by (*a*) self-will, (*b*) weak will? Discuss the advantages and disadvantages of giving reasons, when demanded, for obedience to particular rules. (C U.)

28.—Explain precisely what is meant by ideo-motor action, and determine what part is played by feelings of pleasure in actions of this type. (V.U)

29—Inquire into the intellectual value of manual training, such as Sloyd. (C.U.)

30.—Define "ideo-motor" action, and compare it with other simple forms of action. (V.U.)

CHAPTER XXII.

HABIT.

HABIT DEFINED.

Habit is difficult to define satisfactorily. It has been variously defined, but most of the definitions lend themselves to some objection or other.

Actions repeatedly performed tend to become automatic, and are commonly described as instinctive in their nature. Hence habit has been defined as **acquired instinct**; and since the perfect habit practically operates without the will or intention, it has also been defined as **derived automatic willing.** But habit differs from instinct. Instinct is bestowed; habit is acquired. Moreover instinct has no beginning in the same sense that habit has. Again, according to certain physiologists the effect of habit is to add to our instinctive movements by subtracting from our voluntary ones, for they define habit as **unconscious and involuntary actions** as distinct from conscious and voluntary ones.

Curtman defines habit as **the formation of an outer or inner action into a propensity.** The organic powers grow through practice. Their actions in this way become easier, skill is acquired and habit also, in so far as an inclination to repeat the action frequently is connected therewith. **The action by the performance of which a habit is created is called habituation.** But Campe points out the weakness of this definition. He says that *propensity* and *skill* should be kept apart, although they are often mistaken for each other; for there is often great skill without any perceptible propensity, and strong propensity without

any noticeable skill. As examples he instances the galley slave, who has skill in rowing, but no propensity for it; and the ungifted student of the piano, who has the propensity and no skill. Propensity should not therefore form part of the definition, as it is not a general and necessary result of every habit.

Habit is frequently defined as **second nature.** In reply Rudestock points out that the proverb is habit *becomes* second nature; *i.e.*, it lets many functions become second nature. Habit itself is not this second nature, as it is found not only in mankind, but also in beings of a lower order, where there can be no question of *self-consciousness* and *self-determination*, which Deinhardt, who adopts this definition, considers the essential characteristics of this second nature. Hence these ideas should not enter into the definition.

Murphy explains habit as **a tendency of certain actions to repeat themselves, or at least by repetition to gain greater ease of action.** Similarly, Sully defines it in its most comprehensive sense as **a fixed tendency to think, feel or act in a particular way under special circumstances.**

HABIT ANALYSED.

We note a fixed tendency or a disposition to perform the act upon receipt of the cue, with little or no prompting of the will. This is the *psychological element.* But habit has a *physiological element* also, as is shown in the modification of the nerve structures concerned. The physiology of habit extends to every organ and tissue of the body.

For the completion of the habit a firm connection between the action and its cue is necessary. For this purpose *regularity is more important than frequency.* The man who retires regularly at a certain hour each night becomes painfully conscious of the strength of habit if he is delayed beyond that hour. The man who winds up his watch at no fixed time each day may occasionally let it run down, but he

who does it at a certain fixed time rarely, if ever, forgets it. The *association* is too firmly fixed by the regularity of the recurrence of the action. The frequency of the act is practically as great in the one case as in the other. It is the *regularity* which hastens on the perfection of the habit.

MENTAL LAWS CONTROLLING HABIT.

Every habit has a beginning for which *a motive is required*. Each repetition of the action will demand a decreasing effort of the will, until the movement becomes one of pure habit, and then the effort of the will is practically zero.

Since habit grows stronger with *repetition*, many regular repetitions are necessary. Dr. Eisenlohr points out that the more manifold and *varied* these repetitions, the more unrestricted and unconstrained will be the acquired skill; *i.e.*, the repetitions should be made from different points of view, and under other conditions, especially in all mental studies. These repetitions lead to an *Association*, the nature of which has already been pointed out. The association must be so close and firm that the action becomes automatic, unreflective, or mechanical.

The formation of habit demands *plasticity*. Growth is much easier with children than with adults. It is easier to bend the pliant twig than the stubborn stem. Speaking generally, the older we get the more difficult the acquisition, and this is partly due to the force of conflicting habits. There is generally something to unlearn. In the case of the child who has held his pen wrongly, the fixed habit conflicts with the efforts to hold it correctly. This can be partly explained physiologically, for plasticity is connected with the entire character of the tissues, and their rate of destruction and repair. With age the organs and tissues reach their full growth, and an actual physical consolidation takes place; and the same is true of mental life.

VALUE OF HABIT.

The value of habit depends upon the nature of the habit, whether it is good or bad. Speaking generally, the formation of habit is advantageous, but there are certain risks run in the process which constitute a defect.

I. **Advantages.** Every activity, whether of mind or body, influences the general development of the child: hence the formation of habit is very important. Good habits are valuable, because under their influence *right conduct is rendered easy.* The will is thus spared effort, and volitional power is economised. This *saving of power* is equally extended to sensibility and intellect. Habit sometimes restrains superfluous activity of the muscles, and checks the riotous run of the imagination. There is a time for study and a time for play. Habit fixes these, and so acts as an *economising force,* for excessive play is a check to good mental work. Hard things become easy by repetition; our behaviour becomes fixed in right directions if the habits be good, and the physical care of the body is ensured; and all this is done with a minimum cost of effort, leaving the mind free for other matters.

Habit is also a great *aid to the Intellect* generally. The growth of the power of *attention* is the result of the growth of habit; and we seek to cultivate the habit of close *Observation.* Habit strengthens *Memory,* and enlarges mental capacity generally, by the formation of such habits as concentration, repetition and classification. It is even necessary for *Reasoning,* for the reasoning faculty contains as one of its elements the fixing of a habit of inquiry. The *Laws of Association* depend upon habit for their existence sometimes, for in those cases where no special interest is aroused, a number of like occurrences is necessary to fix the association firmly. And speaking generally, habit *lessens the narrowness of Knowledge.* Many people cannot follow out a train of thought—their minds are too discursive. The function of habit is to check this.

From a still broader point of view, habit is *valuable to*

Education generally. One of the great aims of education is to form good habits, physically, mentally and morally. We often use progress in the formation of habit as a test of the progress of education; hence good habits become as important as good principles. Things thoroughly learned often pass into second nature or habit—a most important fact educationally. The value set by the world upon habit is forcibly shown by the numerous proverbs bearing on it, and by its cultivation in our schools.

II. **Defects.** A life of perfect routine flows easily under the influence of habit, but the very uniformity of such a life is a poor preparation for right action in the presence of new circumstances. Both will and feeling are deadened by routine, and *the domination of habit means the arrest of development.* Fixity in certain directions is required, but a certain amount of plasticity or mobility is still necessary. The difficulty is to get the happy medium. We require to be the masters of habit, and not its slaves. It was the danger of too much fixity which caused Rousseau to urge that children should be accustomed to nothing, not even the predominant use of the right hand.

The influence of habit—together with fading sympathies due to fading senses—explains the reluctance to change which characterises so many people as they grow older. *Habituation and decay strengthen conventionalism*, and act as strong conservative tendencies generally.

HABIT AND CHARACTER.

Habit is the middle term between Action and Character. The sequence is action, habit, character. There is no habit without action, for the term itself implies the doing of something. Then character is largely influenced and formed by habit; in fact, *Moral character is often said to be a bundle of habits.* There are certain original tendencies in every child which we call his disposition, and these tendencies need guiding, regulating and developing generally. This is done by utilising the child's activities;

that is, by action. Meantime the will is developing, and this also proceeds through action. The disposition and the will then act and react on each other, through the medium of habit very largely, to form character. Characters vary, because habits vary. In the formation of habits, the teacher will have need to consider the temperament or disposition of the child and his environment, both social and natural. Progress will be easier along some lines than others, and these lines will be marked out by the elements just named. The teacher's business is to take the right line of least resistance.

FORMATION OF HABIT IN SCHOOL.

The formation of habit is greatly expedited by the *use of good methods*, and the right methods for the teacher should be *based upon the Laws of Habit.* Aristotle asserts that more men are made bad and ignorant by education and habit than by nature. The importance of *Activity* must not be forgotten. Both school and the playground afford abundant scope for the formation of sound habits, which might first be focussed on a proper sense of duty, and afterwards raised to an acting out of suitable virtues like honesty, justice, temperance and charity. New habits are irksome in the initial stages; hence the teacher must first seek concrete examples for practice. Pity should be shown to the unfortunate, justice to the weak, and truth to all. The teacher must enforce these by his own *example*, and encourage their *practice* among his scholars. Above all, he should see that *a successful beginning* is made, and for this it will be necessary to await, or create suitable opportunities. But the awaiting is preferable to the creating, for the natural is always better than the artificial. An unsuccessful beginning means the formation of a bad association, which will be a serious obstacle to the formation of the habit desired. With a good beginning the higher feelings will grow stronger, the lower weaker; and better habits will displace inferior ones.

The teacher will also need to remember the importance of that mental rule which not only demands repetition, but *regularity in the repetitions*. The object is to see that the association formed is never broken. The facility with which the association is made will depend somewhat upon *temperament* or *disposition*. Hence the teacher should study these carefully. The sluggish boy will form the habit of industry more slowly than the boy of active temperament, and the boy with special sympathies will outstrip the boy with special antipathies to the habit involved. Meantime the development of the will is proceeding, and its cultivation will bring facility of acquisition, for habits are not all easily acquired. They do not all proceed along pleasant paths, and an effort of will is often necessary. The *spirit of the age* makes some habits more difficult of acquirement than others. *Custom* demands habits of cleanliness, decency, etc., but it is not so exacting over temperance, modesty and unselfishness.

We will now treat in more detail some of the methods for the formation of certain habits in the school.

I. DILIGENCE.

The formation of a habit of diligence will necessitate *practice*, and will proceed through *association*. It will utilise, by good organisation, classification and a well-arranged time-table, the child's *love of activity*, with those alternate remissions which are necessary both to health and success. Where possible it will proceed through *Interest* in the work, which may arise from its *attractive nature* or from other causes already pointed out. *Example* will materially assist, and where the sympathy between class and teacher is strong it will often be sufficient. Where both of these fail, *authority* must step in and divert the child's activities into the required channel. For it must be understood that lack of diligence, as a rule, does not mean lack of work, but *lack of prescribed work*. The child will sooner or later form a habit of work, because the mere exercise of his activities

is pleasurable, and, as a rule, this standing attraction will gradually wear down the irksomeness of the first stages. *To older scholars the immediate and prospective advantages of diligence may be pointed out*, but talk about the *dignity* and *necessity of labour* to young children is wasted, because it is not yet understood. Necessity is first apprehended, but the feeling of dignity, where it comes at all, comes much later. Necessity should be made to embrace *pleasure, health* and *development*, as well as *sustenance*.

Where laziness is pronounced it will generally be found to result from *Constitution* or *Disposition*. *Constitutional Laziness may proceed from weak or delicate Health.* In such cases lighten the work. *Ignorance of, or indifference to, the elementary principles of child life* on the part of the teacher may be another cause, and here the remedy lies easily with the teacher. This ignorance or indifference may show itself in the failure to fully utilise the child's activity, or to allow for constitution or temperament, or from a neglect of natural aptitudes. When habit is more responsible than constitution, the teacher must *form conflicting and higher habits*, and enough has already been said in this chapter to indicate how it should be done.

Allowance must be made for *Disposition*. Comenius practically recognises six different kinds, which may be briefly classified thus:—

Disposition.	Treatment.
1. **The Clever and Industrious.** These make good students, because they are ingenious, anxious to learn and tractable.	1. These require only an offer of food for wisdom; they grow like rare plants. They need checking rather than stimulating.
2. **The Slow and Tractable.** These, though slow, are penetrating.	2. They only need stimulating, but they require patience.
3. **The Studious and Stubborn.** These are penetrating	3. These are very trying, but properly trained they generally

Disposition.	Treatment.
and studious, but at the same time stubborn and obstinate.	grow up to be the greatest men. "Obstinacy" is specially dealt with in the chapter on the Will.
4. **The Dull and Industrious.** These are obedient and studious, but slow and difficult of comprehension.	4. Patience and sympathy are required here. "We must stoop to their level; we must not place too heavy burdens upon them, nor judge them harshly, but must bear with them willingly, raise them, encourage them, cheer them, that they may take heart. They may reach the goal later, but will endure longer, as late fruits generally do."
5. **The Dull and Indolent.** Their dulness and laziness make them very troublesome. As a rule, feebleness of body and will goes with indolence.	5. Skill and patience are required. Indolence here, as in other cases, should be attacked through facilities for special aptitudes (if any) and through play, until the habit of some kind of work is formed.
6. **The Dull and Ill-willed.** This class includes those dullards who are ill-willed by nature, wrong-headed and generally spoiled.	6. It is suggested that these should be left alone, if it is found impossible to improve them. In such cases the teacher would have to rely largely on the discipline of consequences, and watch for suitable moments in which to make his educative efforts.
7. **The Clever and Indolent.** The above classification seems to have overlooked this class, which is a combination not unknown to most teachers.	7. The indolence here is only relative or special. Indolence rarely goes with ability, for ability implies some form of activity. If it arises from ill-health the difficulty will disappear with improving health. Otherwise proceed as with the dull and indolent. The clever indolent child may also be the result of bad classification.

II. CLEANLINESS.

Cleanliness is essential for health, and influences the whole mental life. Spencer says that *dirt is generally accompanied by an inclination towards crime.* In its fullest sense it includes chastity and propriety in personal habits. It adds to comfort, increases or maintains self-respect and improves the taste. Its general necessity is recognised by the law, which wars against its gross breaches, and by public opinion, which condemns all breaches.

The habit is easily formed where home influences aid, but is more difficult with "slum" children. But with all children insist on the *regularity* of the habit. The point is to make the child understand the *certainty* of the rule, that there is no escape from it. The comfort ensuing will soon be a sufficient motive of itself. The child should live and move in an atmosphere of cleanliness. The school should be clean, the work should be clean, the teacher aiding by example. In ordinary cases there should be no exposure to hurt the feelings. A little quiet and personal talk will generally be sufficient. Precept may be used, but example and certainty are the chief means.

III. GOOD MANNERS.

Good manners supply the oil which makes the social machine run easily. A *refined bearing* is a valuable and pleasing attribute. It includes *tact* in our dealings with others, and consideration for the feelings of others is its chief element. Hence it will conform to all proper *conventionalism* for the sake of others. It is a difficult acquirement, requiring a suitable social atmosphere, much observation, consideration, self-control, tact and imitation. It includes *deportment* as a factor.

Politeness teaches us never to give any preference to ourselves, and its essence consists in treating others as if they were ideal people. So far as manners are concerned it makes us be to others as we would they should be to us.

Politeness is only the form of this altruism; the moral sentiment is the base.

Good Manners might be called the outward and visible sign of the inward and spiritual grace, if the latter were always present. But conventionalism sometimes kills it, and leaves the visible sign as mere veneer. But the *association* is valuable. The sign may beget the feeling, and the feeling the sign. A well-mannered person is a pleasurable, and therefore desirable, social unit. Good manners often involve some sacrifice of self, and self-sacrifice arouses feeling, which is contagious, and may impel to like actions in others. Good manners are the shell, but the feelings are the kernel, hence *let the habit rest on the practical culture of the requisite feelings*. All the little courtesies of life should be regularly practised—the respectful address, the becoming manner and speech, the raising of the hat, courtesy to ladies and a due regard to conventionalities generally. Utilise the *Æsthetic Sentiment* as an aid by cultivating the love for the good, the beautiful, the fit and proper. There will then be a greater readiness to perceive and appreciate like qualities in conduct and bearing.

Rosenkranz points out two *dangers:* (1) *the accentuation of individuality* by deviations from the code of politeness to such a degree as to have a mania for attracting attention; and (2) *a slavish dependence on conventional forms* to such an extent as to appear constrained and pedantic. The latter indicates weakness, the former strength, of individuality.

TRUTHFULNESS AND HONESTY.

I. **The Nature of Truth.** Truth has been negatively defined as **that which does not deceive.** Intellectually it means "the agreement of all our knowledge with itself, the parts with the whole, the subjects with their predicates." The apprehension of truth gives rise to a feeling of pleasure, and this feeling is due to the harmony of truth with itself. In its moral aspect the word has a wide meaning, and it is a

social necessity. It includes all such elements as accuracy in obtaining and stating facts, sincerity, candour, ingenuousness, uprightness, respect for the property of others, and an honest use of time.

II. **Causes of Untruthfulness.** These may be various, but the chief may be reduced to four. It often arises from *Cowardice*—from the desire to shirk some punishment. *Selfishness* is the chief cause, and many other causes may be traced back to this—in the desire to secure some gain, to remove some obstacle, to win some contest. A *redundant imagination* is the cause of much exaggeration, whilst *envy* and *malevolence* often lapse into this vice.

III. **The Importance of the Cultivation of the Love of Truth.** "Education has no more serious mission than to inculcate love of truth, and to wage war on credulity and error" (Compayré).

Sidgwick is of opinion that veracity is not a definite moral axiom, and that "common sense" and expediency do not prescribe truth in all cases. But it is evident that the application of this doctrine involves extreme difficulty and danger. Self-interest too often masquerades as wise expediency; and no one, however pure his motives, can habitually tell what he knows is not true without tainting his moral judgment and weakening his will.

It cannot be too strongly impressed upon children that under no circumstances is a lie justifiable. They should never be allowed to hesitate for a moment, or to think about saving themselves or saving others by telling what is false.

The right—not the expedient—is the aim of a sound moral education. The "good" of the individual is transient and ever changing, so is the welfare of a class or even of a nation. Truth is unassailable, unalterable, and "endureth for ever".

IV. CULTIVATION OF TRUTHFULNESS: GENERAL PRINCIPLES.

The most powerful influence in the formation of a habit of truthfulness will be the force of **example.** The teacher must support his precepts by example, for example is always better than precept. His example will stand out as a chronic living object lesson of the value of and love for that virtue which he is demanding of his scholars. Above all, he should avoid indulgence in those pale "*social lies*," which receive too much fashionable sanction.

In dealing with a lie, he should always seek out the **motive,** and work on that. Lying is a dependent vice; it is the servant of the motive. Hence the teacher who proceeds to deal with the one without inquiring into the other is practising a bad method, which can produce only bad results. When the motive is known the treatment can be more profitably adapted.

There should be nothing provocative in the **discipline** of the school. *A lax discipline, a careless correction of work, an inefficient supervision,* may tempt to acts of dishonesty. They afford *opportunity* for cheating and kindred faults, whereas a good discipline will always seek to reduce opportunity to zero. *Undue severity* is equally injurious. It drives the vice deeper home. It converts lip-lying into deceit.

Conduct, on occasion, may give rise to **suspicion,** but it should rarely, if ever, be shown. A revealed suspicion often invites to a contest. The boy does not necessarily become better because he is suspected; he only becomes more cautious and cunning in his vice. Hence the teacher should not be too ready to accuse of falsehood, for it proclaims suspicion.

The value of **Association** should not be forgotten. *Confidence should be associated with truth; surprise, pain* and even *distrust*, for a time, *with falsehood.* If the sympathetic affections are properly cultivated, this will often be efficacious of itself. Children are prone to exaggeration,

and truth often suffers as a consequence. But if the *exaggeration* be always met with a *solemn silence*, it is starved at its roots—the love of approbation and the love of power.

The **imagination** should be controlled and regulated, for we shall see in a subsequent paragraph that with some a redundant imagination leads to inaccurate statements. The habit of exaggeration is also sometimes explained in this way. Object lessons are a good corrective, although by no means sufficient of themselves alone. Anything which tends to cultivate careful observation and exact description will be found valuable. The cultivation of the intellect generally will materially assist if it proceeds on right lines; *e.g.*, it should recognise that it is easier to teach young children not to deceive than to tell the truth, because of their weak intellects and limited experience. Every principle as yet laid down is a force in developing the **Moral Sense**, but in addition, the teacher will remember what has already been said on this subject in a previous chapter, and will seek to foster *a sense of honour* and *a sense of shame*. *A sensitive conscience* will show a preference for truth, will keenly feel the baseness of lying, will recognise that the lie which is only half a lie is often the worst of lies, and will love truth for its own sake. The teacher's aim is to form a **moral habit** of truth-telling by the consistent and persistent application of the principles specified. He will lay it down as a general maxim of school life, to "speak the truth and speak it ever."

The application of these principles to any particular act of falsehood should now be plain to the teacher. His aim should be to implant these principles in the disposition rather than to prohibit certain acts. On a first occasion he should show *surprise* and *gently reprove* with an appearance of sorrow at the disgrace involved. If this be insufficient, he should *rebuke* the child, and *show displeasure*. *Confidence should be removed*, and gradually restored only after penitence has proved its genuineness by rigid truthfulness. Meantime the *stimulus of hope* should be applied

so as to encourage the mending effort. If in any case *confession* is made, the feeling which prompts it should be tenderly recognised, for it may denote the growth of a sensitive conscience.

V. MORAL ARGUMENTS TO BE USED.

1. With an Older Scholar. Whilst a knowledge of general principles is very essential, yet in practice the teacher will find it not only necessary, but desirable, to vary their application according to the age of the scholars. His resources are obviously greater with an older than with a younger scholar, for in the former case the volitional and intellectual elements are stronger.

Much may be done sometimes by helping the scholar to understand his own *nature* and *disposition*. The too fervid imagination, the love of approbation, the love of power, the desire to snatch a temporary advantage, to escape a threatening ill, are motives frequently prompting to untruth; and if these are calmly and feelingly pointed out, the pupil is both forewarned and forearmed against the dangerous tendencies in his nature.

An older scholar is also in a position more or less favourable to understand the disastrous *consequences of lying*, and these should be dispassionately pointed out. Some of these have already been enumerated, but in addition, its relation to the better known virtues and vices should be shown. For instance, honesty includes justice. Lying is a form of dishonesty, and so is unjust. It reveals a lack of equity, for it fails to meet confidence with merited truth. Hence there is a loss of confidence, a destruction of mutual trust, and a blow aimed at social existence. Truth is a social necessity and a legal obligation. The discovered liar is despised; the convicted perjurer is punished. The personification of evil is called the devil, and the deadly nature of lying may be fully seen in the fact that he is called the father of lies. The liar is often like the dipsomaniac. He cannot stop at one lie, for there

seems to be a fatal necessity to multiply them. Mendacity is a bog, in which every lie sinks the victim deeper. Lying is also a fruitful source of strife. It is brutal, for it generally inflicts undeserved injury on others. It is antagonistic to benevolence, for it shows a want of sympathy and the possession of malevolence.

The *moral discipline* of the school must be made operative. It will not be enough to reprimand for the disgrace attached to it, but efforts must be made to *cultivate a spirit of moral reverence for truth*, a moral pride in truth-telling and honesty. Conscience and experience will then combine to show that, despite apparent exceptions, honesty is always the best policy.

2. **With a Younger Scholar.** To deal successfully with childish untruths, it will first be necessary to understand their general *nature*. The *imagination* is responsible for some untruths. Watch children at play, and note how busy the imagination is very often. The creatures of their brain become living personalities to them; their subjective thinking becomes objective reality. Hence their untruths may be half play and half self-deception. Again, their *intellectual development* and their *experience* are neither yet sufficient to enable them to understand the importance of truth. Jean Paul says: "In the first five years our children say no true word, and no lying one; they only talk. Their speaking is a loud thinking; but, as half of a thought is often yes, and the other half no, and as they—unlike us—utter both, they appear to lie, while they only speak to themselves. Furthermore, they enjoy playing with the bit of speech new to them; thus they often speak nonsense, only to listen to their own knowledge of language."

This will often explain their *motive* in fibbing, for the fault rarely deserves a harsher name in their case. But a young scholar will often tell a "story" to escape a punishment, to spite some one, or to gain something, just as older boys will; and in so far as the motive is the same, the moral treatment, whether by argument or otherwise, must

be somewhat similar too. The arguments will be more simple and more restricted, but they must be utilised. The *discipline* will be milder, as becomes their tender years and growth. Sully suggests that their fibs are often the outcome of the childish instinct to upset the serious attitude of authority by a bit of fun.

The *moral arguments* then will be regulated by the nature of the untruth and the motive which prompted it. They must be backed by concrete examples, must be suitable, simple, and when expressed in rules, so far as possible, negative. Vices are prohibited; duties commanded, as is seen in the Ten Commandments. The "arguments" will often have to be dogmatic, and rest for their strength on respect and mutual affection. As the intellect grows, as knowledge increases, the arguments may approximate more and more to those used with an older scholar.

VI. SPECIAL CASES.

1. Convinced, but Unproved, Lie. A teacher may feel convinced that a child is lying, and yet be unable to prove it. The position is a difficult one, as any method of treatment must more or less imply suspicion, the disadvantages of which have already been pointed out. But a successful lie is attended with such evil psychological results that it may be wise to choose the less evil of the two. Waitz says: "If, in consequence of the transgression of a command, conscience has been awakened, it will be almost entirely silenced by the successful lie, for the transgression seems obviated thereby, as it has become invisible. Herein is the great danger of the lie: it permits the transgression, which it withdrew from discovery, to appear less great and important, as the feared results thereof are now happily turned away, and in this way it dulls the conscience in general." In such cases the teacher's conviction should rest on good circumstantial evidence before it leads to action. If the evidence is not strong the pupil should be carefully watched, but without raising suspicion. Detection

and conviction may await the next lie; if not, it adds at least one more link to the circumstantial chain. But where action is taken the disgrace of lying should be pointed out, and its general consequences; and the pupil should be made to feel some of these consequences. Meantime the offender should be made to understand that a feeling of shame is the proper concomitant of a lie, but not of a confession. That requires moral courage, moral backbone, and is a thing for commendation rather than condemnation. If the teacher is thoroughly convinced there need be little fear in acting, for the consciousness of lying can hardly support a feeling of injury in the offender. It is also very important to make him understand the certainty of the penalty which follows the offence. Subsequently, suitable cases might be chosen from the scriptures, from history, literature or school experience, to show the futility of lying and the impossibility of escape.

2. **Widespread Dishonesty in School.** Lying is contagious, and Sully says this is probably due to the force of suggestion. But *widespread* dishonesty in a school, where it exists, does so in one well-known form generally—**copying.** Other forms of dishonesty may be more or less prevalent, as in the case of presenting home work done by others as one's own work, in the forging of exculpatory notes, or in the obtaining of them from unauthorised or illegitimate sources, in acts of petty theft, or in that pretence of work which a lax discipline permits; but the attribute "widespread" can scarcely be said to belong to any of these. But copying knows no caste, no age, no creed. Its probable existence is recognised from the bottom to the top of the educational ladder; from the precautionary measures of the primary school to the "bull-dogging" in university examinations. How is copying to be prevented?

Its *sources* must be sought out, and curative efforts must proceed through them. It may arise from *ignorance*, and the teacher's task is to discover and remove it. Where

it arises from *laziness* or *indifference*, siege must be laid to the conflicting habit, interest must be aroused and honest work regularly enforced. Where *inattention* is the cause the relative inefficiency of the teacher is proclaimed, and he will need to mend his methods and his discipline. *Physical* or *mental weakness* is a more venial source, which requires patience and sympathy. Efforts of attention may be made, but the power of *concentration* may be too weak to meet the demand involved by some lessons. The worst case is that in which the *moral sense* is weak, and of which copying is merely one evidence.

The teacher should *minimise opportunity* by a suitable arrangement of desks, by a maximum of desk spacing, by "mixing" the different grades of pupils when possible, by giving different sets of questions and by close supervision. With the hard-worked or thoughtless teacher there is often too much temptation to seize the opportunity of an examination, or the working of a test or example, to clear off other branches of his work, such as preparation, correction or clerical work. It is always a mistake, for it is never profitable. It is placing a temptation within easy reach of the pupils, which is unkind to all, and absolutely cruel to young pupils, who are subjected to a moral strain which their immature moral sense is not yet strong enough to withstand. But a *sound moral tone* is the best antidote. Cultivate this; live up to it; place the honour of the class in the hands of the pupils themselves as soon as they are fit for it; foster a pride in maintaining it; give proper assistance in every case and copying will soon cease to be widespread.

CRUELTY.

Children are often said to be cruel, and especially boys, but it is doubtful if much of it does not lack the essential motive to real cruelty. There is probably very often little or no malicious intention to inflict pain, and to rejoice at the sight of suffering. Much of the so-called cruelty of young children is capable of some other explanation at least.

Underlying every act of cruelty is the child's *love of activity*, which leads him to interfere with his fellows or with animals. His *love of power* gives a rough element to this, which may show itself in harsh treatment or in the milder forms of *domineering* or *teasing*. The child feels the will of others imposed on him, and he seizes opportunities to play the same part. If no opposition is offered it often ends here, but not otherwise. Children delight in showing their power—like most adults—and any attempt to thwart them is likely to lead to the infliction of pain. But the motive is not cruelty—it is love of power. There is some difference where preference is shown for other children at the expense of the child. The loss of power carries with it added feelings, which may come very near the real motive to cruelty.

A child's *curiosity* is insatiable, and its gratification sometimes leads to acts of apparent cruelty. This will explain, in some measure, the treatment meted out to the cat, the dog, the fly, the butterfly or the worm. Perez tells of an artist, who, as a child, used to crush flies between the leaves of a book for the sake of the odd designs thus formed. This destructive form of cruelty is also more or less the result of *ignorance* or *thoughtlessness*. The child does not know that he is inflicting pain, or he forgets it under the stimulus of keen curiosity.

We have already referred on a former page to the force of *example* in the formation of habit, and example operates in many channels. The existence of the Society for the Prevention of Cruelty to Children, and the kindred Society for the Prevention of Cruelty to Animals, speaks volumes on the subject. The law of libel is a necessity for checking cruel tongues or pens, but it does not reach that ocean of petty malice-mongering speech with which society in all its grades is ever dripping. In the school itself, fighting, fagging, bullying and tyrannising are probably more or less daily experiences, and are only less injurious than the harsh discipline of a cruel teacher.

Cruelty as a habit must be rooted out where it exists, but prevention is better than cure. The school discipline and curriculum must allow for the love of activity; the love of power must be diverted into healthier channels; curiosity must receive healthy and plentiful gratification; and ignorance must be removed by suitable object lessons on animals. The social affections should be cultivated, acts of kindness should be practised and encouraged, and differences in temperament and disposition should be recognised and allowed for. The occasional act of cruelty requires different treatment to the habitual act. Children should be led to abhor cruelty, and taught that nothing should be spoiled or destroyed but for the sake of something better. Hence the school discipline must not be harsh or cruel, but judicially kind; the school games should be encouraged, but regulated and disciplined; and finally sound principles of religion and morality should be implanted in the heart.

Summary.

Habit Defined.

1. As acquired instinct.
2. As derived automatic willing.
3. As unconscious and involuntary action.
4. As the formation of an outer or inner action into a propensity.
5. As second nature.
6. As a tendency of certain actions to repeat themselves, or at least by repetition to gain greater ease of action.
7. As a fixed tendency to think, feel, or act in a particular way under special circumstances.

Habit Analysed.

1. **Psychological Element.** A fixed disposition to perform the action without the promptings of desire.
2. **Physiological Element.** A modification of the nerve structures involved. This depends largely on nutrition.

Mental Laws Controlling Habit.

1. A motive required for first efforts.
2. Repetition strengthens it.
3. Association required between the act and its cue.
4. Plasticity essential.

Value of Habit.

1. Advantages.

(*a*) Right conduct is rendered easy.
(*b*) It is economical of power.
(*c*) It aids the intellect.
(*d*) It is valuable to education generally.

2. Defects.

(*a*) The domination of habit arrests development.
(*b*) It strengthens conventionalism.
(*c*) It leaves the will powerless in the face of fresh circumstances.

Habit and Character.

Habit is the middle term between action and character.

Formation of Habit in School.

1. Use good methods; these should be based on the laws of habit.
2. Utilise child's feeling of activity.
3. Enforce by example.
4. Make a successful beginning.
5. Remember that regularity is more important than frequency.
6. Allow for temperament and disposition.

Some Special Habits.

I. Diligence.

1. Teach practically; utilise activity.
2. Fix pleasant associations with work.
3. Use exposition with older scholars.
4. Seek cause of laziness and root it out.
5. Allow for disposition.

II. Cleanliness.

1. Show that it is essential for health, physically and morally.
2. Insist on personal cleanliness.
3. Encourage neatness, and tidiness in work and person.

III. Good Manners.

1. They include a refined bearing and politeness.
2. They include a proper deportment.
3. They demand that we should bow to conventionalism (as a rule).
4. Their culture embraces :—
   (*a*) An association between the act and its feeling
   (*b*) A practical culture of the feelings
   (*c*) The aid of the æsthetical sentiment.

5. The dangers attending their culture are:—
   (a) The accentuation of individuality.
   (b) A slavish dependence on conventional forms

IV. **Truthfulness and Honesty.**
1. *Truth is that which does not deceive.*
2. Causes of lying—
   (a) Cowardice.
   (b) Selfishness.
   (c) A redundant imagination
   (d) Envy and malevolence.

V. **The Importance of Truth.**
1. The inculcating of truth the most serious mission of education.
2. Sidgwick affirms that expediency does not invariably prescribe truth.
3. But the right—not the expedient—is the aim of a sound moral education.
4. Children should be invariably made to speak the truth.

VI. **General Principles** (cultivation of truth).
1. Show good example.
2. Seek out motive and work on that.
3. Avoid provocative discipline.
4. Make use of good associations.
5. Control and regulate the imagination.
6. Cultivate the habit of truthfulness.

VII. **Moral Arguments.**
1. With older scholar.
   (a) Help him to know his own nature and disposition.
   (b) Show the consequences of lying.
   (c) Cultivate reverence for truth.
2. With a younger scholar.
   (a) Remember the general nature of childish fibs.
   (b) Consider the motives which prompt to untruth.
   (c) Moral arguments to be used will be regulated by these facts.

VIII. **Cruelty** may be due to:—
1. Love of activity.
2. Love of power.
3. Curiosity.
4. Ignorance.
5. Thoughtlessness
6. Example.

QUESTIONS.

1.—What do you understand by habit, and what laws of mental science control the functions of habit? Say what school discipline can do in the encouragement of right habits. (E.D.)

2.—How would you train your pupils in good manners? In what respect would you expect pupils so trained to differ from those whose training has been neglected? (E.D.)

3.—What is to be understood by habit (1) in a mental, (2) in a physiological sense? Explain and illustrate habit as the middle term between action and character. (E. D.)

4.—State and illustrate the laws of the formation of habit. Why is habit called memory of the will? (E.D.)

5.—Enumerate some of the chief kinds of habits which may be formed in school, showing the importance of each. (E.D.)

6.—Give some practical rules for the formation of some moral habit, with a view to fixing it firmly and lastingly. (E.D.)

7.—Show how you would seek to promote honesty, perseverance and thoroughness in school work. What are the chief obstacles which you might expect to meet? (E. D.)

8.—What special measures would you take to secure honesty, independence and thoroughness in school work? (L.U.)

9.—Why should children not acquire habits? (L.U.)

10.—How would you deal with widespread dishonesty of work in school? (L.U.)

11.—How would you cultivate the habit of truthfulness? Trace its connection with scientific accuracy, and with the work of a school generally. (C.P.)

12.—Write a short note on the formation of habits. (C.P.)

13.—How would you deal with (*a*) a clever but indolent child, (*b*) a dull but industrious child?

14.—What do you understand by the term habit? What steps should a teacher take to preserve in the scholars flexibility of mind and susceptibility to new impressions? (E.D.)

15.—Point out and illustrate the moral significance of the fact that practical habits are formed and strengthened by repeated acts, and that passive impressions grow weaker by being repeated upon us. (L.U.)

16.—It is often said that boys are cruel; show in what limited sense the statement is true. (L.U.)

17.—What is meant by habit? What general psychological principles does it illustrate? Show how a habit such as punct[illegible] is formed. How is the process completed when an old habit has to be broken through? (L.U.)

18.—State and illustrate the moral arguments you would use to a Standard VI. child in regard to lying (E.D.)

19.—Briefly explain and illustrate by an example moral habit. (C.P.)

20.—How would you deal with cases of (1) indifference, (2) idleness? (C.P.)

21.—How would you deal with the following faults and difficulties: (*a*) Indifference, (*b*) untruthfulness, (*c*) dishonesty of work, (*d*) careless preparation? (C.P.)

22.—Give a short account of moral habit. (C.P.)

23.—How would you act in the following cases. (*a*) A boy confides to you in private conversation that certain of his schoolfellows have been guilty of dishonest practices; (*b*) it is reported to you as headmaster by an assistant master that he has been hissed by his form; (*c*) a boy tells you what you are morally convinced is a lie, though you cannot bring the proof home to him? (L.U.)

24.—Write a short account of habit, and say what the teacher has to do with it. (C.P.)

25.—Explain how the consistent requirement of certain observances of neatness, punctuality, etc., from a child at school will aid the formation of useful habits in after life. (E.D.)

26.—Analyse voluntary habits into their elements. Contrast them with instincts, and illustrate the difficulties and advantages which arise for the educator from the difference. (V.U.)

27.—Write a short essay on the formation of habits, and show the bearings of this subject on the practical work and discipline of a school. (C.U.)

CHAPTER XXIII.

CHARACTER.

CONDUCT.

We probably know what is meant by conduct, but it is not easy to define it correctly. Some say it is **human action.** But running, walking and jumping are human actions; yet they hardly constitute conduct, nor are they peculiarly human, for animals also indulge in them. Even if the action is distinctly human, it is not necessarily conduct. Man is the only self-clothing, food-cooking animal, yet neither action constitutes what we understand by conduct.

The difficulty has been met by adding the attribute "conscious," so that the definition then becomes **conscious human action.** But I am conscious of sitting down, of walking, of breathing, etc., yet my conduct is not judged by these actions.

Another definition describes conduct as **voluntary action.** This is better, as it includes the two aspects of conduct—will and action. It also has another advantage, for conduct is the object of the moral judgment, and the moral judgment is only exercised on voluntary actions. But the same objection applies as in the previous cases. Locomotive movements are voluntary actions, but they are not conduct. There may be nothing of morality in them, and a moral judgment can hardly be pronounced on them.

Conduct is the result of the sum of our habits, and might be defined as **the moral average of that total.**

But we may have habits which are not voluntary (nervous affections), or our actions may have lost their voluntary quality in some cases, and may have become mechanical or reflex. When a moral judgment *is* applied to such actions, it is rather made to refer to the first voluntary actions out of which the habit grew.

The acts, then, which conduct embraces must be those which are both definitely willed, and which are directed to the attainment of some end, hence conduct may be defined as **the performance of those actions which are definitely willed and adjusted to ends.**

THE PSYCHOLOGY OF CHARACTER.

Reflection gives rise to practical maxims. These maxims, carried out in conduct, bring consistency into our volitions and actions; for under their control like cases are followed by like judgments. The maxims themselves are morally graded in the mind, the best one being at the top. This highest principle acts as judge when volition conflicts with maxim. The result is that consistency and harmony are imported into our volitions and actions. This has caused character to be defined as **consistency in willing and acting, both being subordinate to practical principles, which are ruled by one highest moral principle.** The moral direction of the will thus becomes uniform, whilst the volitions, being in harmony, produce a maximum result.

But this consistency and uniformity implies the formation of habits, and this has led to character being defined as **a bundle of habits.** Sully calls attention to the importance of this definition, because it brings out *the essential ingredient in character—the fixity of disposition in right directions.*

CHARACTER: PHASES OF DEVELOPMENT.

In its *earliest form* character is but little more than **the sum of the hereditary instincts** of the child, indicating the mental and moral peculiarities of his mind. As intellect

and will develop, the meaning attached to character becomes more specialised, and it is made to refer to those acquisitions like independence and firmness, which are the products of voluntary exertion. Hence we find character in general sometimes defined as **the uniformity and firmness of the entire will.** But uniformity, as already pointed out, involves habit, and as a consequence, a more precise definition limits its scope to **the self-formed habits of the will.** It will thus be seen that in the *older pupils* character embraces not only the natural instincts, which form the basis of temperament, but also what those self-formed habits of the will add in the way of new dispositions. These habits and new dispositions are moral attainments, and as such are among the best efforts of self-effort and self-control. They tend to supply reliability as well as morality to the character.

We are now able to understand and appreciate a definition like Sully's, which, in a special sense, describes character as **a good or virtuous disposition of the feelings and will**; *i.e.*, it represents the total of the moral faculties as distinct from the intellectual. But will is the all-important factor, and its degree of energy, firmness and consistency moulds and fashions the character. Hence we find it defined as **a completely fashioned will.** This is what is meant by *a perfect moral character;* one in which moral principles are so strong that they shape the entire volition; one which uses the habits of everyday life as channels for good conduct; one whose practical principles are moral throughout, and which governs self according to the dictates of conscience.

Where bad principles rule the mind, and where any other determining power under the influence of passion or rooted desire takes the place of the highest moral maxim, there the character is said to be *immoral.* In those cases where a person is inconsistent, and does not act according to principles, whether good or bad, such a person is said to be *characterless.*

INFLUENCE OF HOME ON CHARACTER.

Home influence on character will give an average of good or bad. So far as the good is concerned schoolwork is made easier. But it is the bad home influence that handicaps the teacher's efforts so severely. In such cases the home training maintains a conflicting attitude to that of the school, and remains as a permanent obstacle to success. Many parents are ill-qualified for the work of training. They are too worried, too busy, too tired, too ignorant, or too something—the result is the same. Their methods are crude and inconsistent; their discipline is *impulsive*. They too often do what the impulse of the moment dictates, whether it is for the good of the child or not. *Wrong motives* are appealed to, and unfortunate associations are thus formed. A child is bribed to do what is required of it, or it is inconsiderately punished. For the same action a piece of cake may be the stimulus one day, and a slap the next.

But impulsive discipline and wrong motives are not the only weak spots. A great deal of what Richter calls "*mixed morality*" is taught; morality which may be applied to one's own advantage. And so *false reasons are given for conduct*, and more bad associations are formed. Furthermore, parents are too often oblivious of intention; they have eyes only for the deed.

SCHOOL AND CHARACTER.

Although home influence may be bad, yet, relatively, the number of "spoiled" children entering school is not large. The reason is easily seen. *Children come to school too early to have already contracted very objectionable habits, or without any very decided bent* beyond what the natural instincts supply, and their *plastic nature* makes them very susceptible to judicious treatment. Thus *early attendance at school is a distinct advantage* so far as the training of character is concerned, for the chief aim of school life ought to be the building up of character.

But *the teacher cannot form character, he can only aid* in forming it, and a proper recognition of this fact must influence his methods School life can assist in laying the foundation, but *the formation itself must be the work of the child.* The teacher's work will be to explain, to advise, to warn and to encourage. But this will necessitate the study of each child, and it will observe closely the mutual play of all those forces which help to build up character.

Character is training, and all training is harder than mere instruction. But *instruction*, although subordinate to practice, is still necessary. It can be specially imparted in the *Scripture lessons*, or in set formal moral lessons, but it should utilise every suitable opportunity during the school day. *Discipline* should help, and there should be a consciousness of purpose running through it all, and this purpose should be kept steadily before the boys, so as to supply that firmness and consistency, that fixity of dispositions in right directions, which is the all-important element in character.

The **means** at the teacher's disposal will include the use of *an intelligent sympathy* and *the study of individual temperaments and dispositions;* for temperament is natural character. The teacher must form *moral habits* in the children, he should utilise a proper *classification of the virtues*, and possess a *correct apprehension of motives.* They will include a course of *special lessons* for the teaching of the chief moral duties, and they will render these practical and attractive. *Example* will be utilised, and the *discipline* of the school will be fitted to its special task. The modifying effect of *intellectual capacity* will be noted and allowed for, and a full advantage will be taken of the *school games* for the observation of the unrestrained dispositions of the children. Finally, the means will include a practical recognition of the fact that the formation of character includes the *cultivation of all the powers of the mind.*

CHARACTER AND HABIT.

Habit is the material out of which Character is built. The voluntary formation of good habits implies growth, and this growth is especially visible in the disposition. There is a disposition to seek some good, such as health or virtue; the good is sought under the influence of practical principles, which in this case would be "obey the laws of health" or "practise virtue." The maxims become stronger with every repeated act and thus pass into habit. *Character is known by conduct and conduct is the result of habit.* We have previously defined *character as a bundle of habits*, of moral habits, which are thus seen to be the result of repeated acts of choice.

School routine is favourable to the formation of habit. The actions involved are demanded as a matter of duty; as the habit becomes fixed they are done from a sense of duty —character is being formed by habit. School routine by means of its curriculum and discipline is constantly forming and fostering habits of feeling, knowing and willing, all of which are contributing elements in character.

CHARACTER AND DISCIPLINE.

Discipline is necessary in the formation of character, but *it is only an aid*, and requires other forces to assist it. *Its weakness is that it rests on authority*, which is not always favourable to the growth of character. A harsh authority may produce a strong aversion to any form of discipline. Hence the discipline should be *liberal*. It should also be *rational*, and should offer suitable opportunities for the exercise of the will, for the cultivation of the will is of far more importance than the cultivation of the intellect. As with habit, *school rules and regulations should be enforced as a matter of duty until they are kept from a sense of duty.* Where penalties are inflicted their guiding principle should be their influence on character. But they should never be severe, because severity weakens the conscience.

But no set of rules will meet all cases, and it is ignor-

ance or neglect of this fact that causes injustice and friction in some schools. Such discipline does not rise above the level of that of a drill sergeant. A judicious repression demands tact, and is by no means easy. It is far more difficult than encouragement, hence the easier way should be chosen whenever possible. Evil tendencies must be weeded out of the mind, so as to give a free growth to the nobler dispositions, but the risk lies in pulling up the wrong things through carelessness or ignorance. Since *encouragement* is so easy, it should be used as a mode of restraint. As prevention is better than cure, a conflicting moral motive might be encouraged against an evil one.

The influence of discipline on character is wide and important, and for this reason a special chapter is devoted to the subject. Here it only remains, therefore, to remind the teacher that **Example** is a very potent factor, and must always form an important part in any satisfactory system of discipline, for *the greatest stimulus to goodness is goodness in others.*

CHARACTER AND FEELING.

Compayré says that *goodness is an affair of the sensibility*, hence the necessity for cultivating feeling as an element in character. The teacher seeks to win the respect and affection of his scholars, because a discipline resting on such a base becomes a moral force for the growth of character. He wins this affection more readily by joining in the games of the playground than by class-room efforts only, and he gets abundant opportunity of studying temperament and disposition. He then learns more of the primitive feelings of the boys, and is able to watch their bent when unfettered by discipline. His knowledge of child nature thus grows in the best way. He sees the difficulty some have in controlling themselves, and he is the more ready to encourage them with a wise sympathy. He notes the feelings which need repression, those which need stimulat-

ing, and those which can be left more to self-development. In this way he is working on the feelings with wisdom and economy, and is forming good characters.

CHARACTER AND INTELLECT.

The formation of character includes *the cultivation of all the powers of the mind.* Then the intelligence must be cultivated so that the child may possess a sufficient amount of attention and reflection, which are gates leading to self-control. A man of character is just among other virtues, and justice demands the exercise of the intelligence. In fact, *all the virtues make great calls on the intellect,* so that a certain degree of intelligence is absolutely essential to character. Where there are no settled convictions, no principles, there is an absence or lack of character. But these are the product of the intelligence. The growth of intellect and feeling is an essential to character, which is thus seen to develop from within the mind and not from without.

The effect of the intellect on character is seen when a child begins *to fix the attention inwards,* and to think and reflect about conduct. But the thought is not valuable for the formation of character, unless it is concerned more with the prompting or restraining feelings than with conduct itself. The teacher's work is to direct the attention inwards, and to encourage the necessary *habit of reflection.* In this way the child will acquire the habit of self-control, and intelligence will operate as a safe stimulus to the will. Whilst all the forces of school life may be more or less utilised for building up character, the teacher will remember that *certain subjects lend themselves specially to the teaching of certain virtues.* Object lessons, science, arithmetic and mathematics, are favourable to truth, and tend to check the exaggerations of a too vivid imagination. History cultivates the moral judgment, scripture lessons the religious sentiment.

CHARACTER AND WILL.

Character has been defined as a completely fashioned Will. Many of the impulses of young children and moral weaklings never get beyond the stage of desire. Action is often arrested from fear of consequences. A number of impulses arise and maintain a state of conflict, which paralyses action. To overcome this a *painful effort is necessary.* After many trials probably, an effort succeeds. The pain of conflict has been mastered, and subsequent efforts will be made with more confidence and decreasing difficulty. Good moral habits, like generosity and truthfulness, are acquired in this way. Conduct becomes more and more rational, and the ruling disposition embraces higher motives. Self-denial may still be painful, but there is now sufficient will to make the sacrifice. In this way the boy grows into a man of character, possessed of reflection, decision, resolution, firmness and perseverance.

MOTIVE AND INTENTION.

A very close relation exists between these terms, but they are by no means fully synonymous. **The motive of an act is that which induces us to perform it.** It denotes the impulse that precedes volition, whether that impulse arises from appetite, desire or affection; hence it is a conscious impulse. It is the final cause which moves the will.

Intention is the end towards which the activity is directed. For instance, when a teacher punishes a child, his *motive* is the child's good, although he *intends* to inflict pain. Now the pain is part of the intention, but it is no part of the motive. The punishment is inflicted from a motive to do good, and in spite of the necessary pain involved. We thus see that motive and intention are mutually supporting. Both are causes, but **the Motive is the ultimate or final cause.**

IMPORTANCE OF A CORRECT APPREHENSION OF MOTIVES.

1. **Motives are Incentives to the Will.** We have defined character as a completely fashioned will; and since motives act as stimuli to the will, the importance of their correct apprehension is obvious.

2. **Volition Follows the Strongest Motive.** This is another psychological fact which emphasises the importance desired. Locke says *the strongest motive is the greatest apparent good, or else the greatest removable uneasiness.* Rosenkranz also asserts that *morality subjects all motives to one supreme motive, the principle of the good.* We are conscious of a power to choose between alternative actions. For instance, a youth may keenly desire to play football; he may wish to oblige his club mates in response to their pressing invitation; he may be strongly interested in the club reputation; and he may have a desire for personal reputation. On the other hand, he knows it will pain his mother; it may risk his efficiency in his business, and be distasteful or actually forbidden by his employers; it may cause the neglect of other social duties; and there may be other pleasures, though more remote or less keen, still available. Now the preponderance of either of these sets of motives will constitute the effective motive, or in other words, will be the strongest volition. It is worth noting that the conflict generally lies between the actual and the ideal, or between the near and the remote; and that an actual or near inferior motive often conquers. Hence *the actual and the near should be met with the remote and the ideal in greater strength.*

3. **Difficulties arising from Disposition.** A correct apprehension of motives involves a knowledge of the individual dispositions of the children. Disposition involves temperament, and both are factors in the will. Hence the teacher will require to know the relations existing between these elements, the various classes of temperament and disposition, their chief characteristics, and their methods of treatment.

4. **The Selected Motives must be Suitable.** The choice of suitable motives will sometimes make very great demands on the knowledge and tact of the teacher, and this is especially the case in dealing with the social class of motives. The selfish motives are the large class with children; the social the small class. The teacher's work is to develop the latter at the expense of the former, and this is difficult, because *it is easier to work on the egoistic than on the altruistic.* The result sometimes is that in the desire to make the social effective, there is a tendency to support them, and so, more or less, unconsciously to subvert them, by enlisting the aid of the egoistic. We may teach that virtue is its own reward, but the child, like many adults, is sceptical. The necessity for strengthening the motive is perceived, and sometimes it is then pointed out that virtue "pays best." Maxims like "Honesty is the best policy" are especially tempting in this respect; the really virtuous elements involved being over-ridden by the thought of personal gain. Hence the necessity for care in application as well as in selection. *Some motives are applicable at one time and not at another. Different dispositions require different motives* even to reach the same result. *Some are best available with the young*, as in the case of rewards; *some are applicable at all times*, as in the love of approbation. An important fact is that motives of some sort are always present, and if proper ones are not put forth, great risk will be incurred of unsuitable ones offering themselves. Roughly speaking, the *suitability is largely influenced by age*. Each period of life has its particular interests and duties, and as a consequence its more or less special set of motives. Admitting this, the teacher's work will embrace the three stages, childhood, boyhood (and girlhood) and youth.

1. **Motives for Childhood.** *Those motives should be chosen whose influence can be felt quickly.* Generous and disinterested motives are beyond children. They cannot return good for evil their practice is rather one of reciprocity. Their

sense of duty is small, hence inferior motives have to be mainly utilised. Conscience is not often available, because their limited intelligence rarely enables it to judge what is right. The teacher's work, then, should be directed towards *prevention* as well as *cultivation.* If he cannot make them virtuous, he can try to keep them innocent. He can strive to prevent wrongdoing; he can cultivate the favourable side of their dispositions; he can teach those personal duties concerning health and the control of temper, and the duties they owe to their parents. *To honour and obey their parents is the chief duty of children,* and all their other duties might be gathered round this as a centre. *Their sense of helplessness or dependence,* the chief characteristic of this class, is favourable to tender feeling, which shows itself in their cravings for *Affection, Pity and Protection.* These then become powerful instruments of right conduct. The *love of activity, a mild form of fear, the discipline of consequences* (within certain limits), *curiosity,* the first germs of the *æsthetic sentiment* (colour, pictures, music), *rewards and punishments, emulation, the love of approbation and the love of power,* will be some among the many motives at the teacher's disposal at this stage.

2. **Motives for Boyhood and Girlhood.** Many of the motives of the previous stage are still available, but *the characteristic now is one of vigorous impulse and self-sufficiency.* The result is that the powerful instruments of the previous stage lose much of their force at this. Tender feeling, though present at times, is displaced by the more vigorous impulses of a bigger and stronger being. Hence the chief motives for this class are the *love of activity, the love of power, love of fame, emulation,* and such motives as more readily appeal to these more vigorous impulses. Another group of motives is attached to the feeling of self-sufficiency. Choosing the right moment, the teacher will avail himself of *those reflected emotions of self-importance,* which are known by the names of self-worth, self-esteem, self-complacency, self-respect, pride and self-reliance. Only the good element in each emotion will be utilised as a motive force. Meantime, education and experience have brought in a new group of motives. The *sense of duty* is stronger, the *ideas of right and wrong* are clearer and more definite, so that *Conscience* may now be appealed to in many cases. But no appeal should be made in doubtful cases, nor should too many appeals be made. Charles Bray points out that what a child does wrong is not often of much importance,

but when he does wrong, knowing it to be so, that *is* of consequence.

3. **Motives for Youth.** There is no lack of motives at this stage; but the difficulty still lies in choice and application. Conduct is often so complex that a complexity of motives is necessary. Of the motives appealed to, one is always dominant, although not necessarily the same motive. *The skill of the teacher will be shown by the promotion of the suitable motive to the front rank as circumstances may require.* The characteristic is *a growing sense of duty*, hence this should be made the dominant motive. *Honour and personal dignity* are also strong influences. Show that any action is mean or vulgar, and it is at once shunned by the majority; stigmatise conduct as dishonourable, and it is not often repeated. *School opinion* thus becomes a standing motive of great strength at this age. The vigorous impulses and self-sufficiency of the previous class have been modified by discipline, increasing mental development, and by experience. The *sense of futurity* is stronger, and so lets in a prudential group of motives that were hardly available in either of the other classes. A more developed *conscience* makes higher motives generally more available to the proper displacement of inferior ones.

4. **Classification of Motives** (Whewell).

(*a*) *Appetites* (bodily desires)—hunger, thirst, etc.
(*b*) *Affections* (towards persons)—love, anger, etc.
(*c*) *Mental Desires* (abstractions)—safety, possession, society, superiority, knowledge.
(*d*) *Moral Sentiments* (connected with judgment of right and wrong)—approbation, disapprobation, indignation, esteem.
(*e*) *Reflex Sentiments* (connected with self)—desire for love, esteem, admiration, and for our own approval.

TEMPERAMENT.

Let us look round a class of children. No two children are alike in body; we can easily distinguish one from the other. But have we ever thought that *no two children are alike in mind?* We can easily distinguish one child's face from another's, but can we distinguish one child's *mind* from another's? We are perhaps not altogether to blame if we have not yet differentiated one mind from another. Our classes are large, much collective work is absolutely neces-

sary. We should not expect all our children to do exactly the same amount of bodily work in a day, yet we condemn them all to practically the same amount of *mental* labour. Still, the teacher, even with a very large class, can, by careful observation, do something to learn the mental idiosyncrasies of each child in that class. He will learn on the one hand that no two minds are alike, and on the other, he will find that minds are sufficiently alike to make some classification possible. Minds can be classified as regards their "temperament."

Temperament.—"Any marked type of mental constitution and development which seems due to inherited characteristics of the bodily organism." (Ladd.)

VARIETIES OF TEMPERAMENT.

I. **Sanguine.**

Physical characteristics. Respiratory and circulatory systems well developed; hair red, eyes blue, skin fair, face animated.

Mental characteristics. Lively, excitable; quickly, but not deeply roused. *Feelings* generally uppermost.

II. **Choleric.**

Physical characteristics. Muscular system well developed; hair and eyes dark, complexion sometimes sallow, face impassive.

Mental characteristics. Less quick than sanguine temperament. Reactions slower and more enduring. Marked by much determination, self-reliance and confidence. *Will* generally uppermost.

III. **Phlegmatic** (or lymphatic).

Physical characteristics. Abdomen large, face round and expressionless, lips thick, body generally disinclined to exertion.

Mental characteristics. Mind heavy and torpid, sometimes nearly stupid. Patient, self-reliant and slow.

IV. **Sentimental.**

Physical characteristics. Head large, eyes bright and expressive, figure slender and delicate, motions quick.

Mental characteristics. Great love of poetry, music and nature, and marked indifference to practical affairs of life,

Cases of Mixed Temperament.

When we try to classify our children into these classes, we shall find that probably no child in our class has a temperament purely *Sanguine*, or purely *Choleric*, or purely *Phlegmatic*, or purely *Sentimental*. Most, if not all temperaments are **Mixed.** Thus we say some children are sanguine-choleric, others sanguine-sentimental, etc.

Effects of Sex, Age and Race on Temperament.

1. **Sex.** *Women* may be described as generally sanguine or sentimental in temperament, or as possessing temperaments in which sanguine or sentimental elements predominate. *Men* on the other hand may be described as having temperaments which fall into the choleric and phlegmatic classes.

2. **Age.** The *Child's* temperament may be considered as sanguine, the *Man's* as choleric, the *Old Man's* as phlegmatic.

3. **Race.** The Latin races may be described as sanguine and sentimental, the Teutonic races as choleric and phlegmatic.

Temperament in Education.

1. *The Temperament of each child should be studied.* The intelligent farmer should know the peculiarity of the growth of every cereal he cultivates, the intelligent teacher should know the peculiar temperament of every mind he has to train. The few practically pure temperaments present no difficulty. It is the mixed species that will give trouble.

2. *The Sanguine and Sentimental Temperaments will give few or no difficulties as regards discipline.* Treatment that is both firm and kind is required. *The Choleric and Lymphatic Temperaments need careful handling*, and are those most injured by injudicious teachers. Avoid entering into a contest with children of such temperaments, for having entered in, it is essential that you should win, and the

cost of victory is often out of all proportion to the result. Above all things, patience is necessary. "A nervous teacher trying to force a phlegmatic boy to action by mere nervousness is a ridiculous sight. The immobility of the one is only matched by the impatience of the other." (Jerome Allen.)

3. *The Sanguine Temperament requires but little stimulation to exertion*, but the effects of stimulation soon die away. The teacher must watch to see that a *habit* of steady and continuous work is formed. *The Sentimental Temperament* must be made to regard the practical side of things. The *Choleric and Lymphatic Temperaments* are difficult to rouse, but when aroused are capable of prolonged effort. The best work of the world has been done, not by the enthusiastic, not by the day dreamers, but by practical men and women.

Causes of difference of Temperament are practically the same as the causes of differences in the development of the mind (see p. 23).

DISPOSITION.

Temperament is confined to emotional tendencies, but *Disposition* embraces these *and the active tendencies or instincts.* It thus embraces both cause (instincts) and effect (feelings). It may therefore be defined as **a total of the inherited active and emotional tendencies.**

The disposition gets its name from its dominant characteristic. Four types are usually given.

1. **The Callous.** Here the sympathetic instincts are weak or wanting. There is more or less insensibility to the feelings of others. This type is by no means confined to the brutal and debased. It may be associated with great intellectuality, where the total vigour of the system has run disproportionately into the three phases of the mind.
2. **The Excitable.** The characteristic of this type is said to be a lack of prudential instincts, and of those present, none are very stable. It is based on a sensitive temperament, which seems to be a combination of the sanguine, choleric and sentimental.
3. **The Energetic.** In this type the practical instincts are said to be well developed. The temperament is described as

robust and normal, but lacking refinement. According to our classification it appears to be a combination of the sanguine and choleric.

4. **The Sluggish.** This is a combination of the phlegmatic temperament with a lack of moral instincts.

DUTY AND VIRTUE.

A child who comes to school punctually and regularly, who performs the prescribed tasks, and keeps the school rules, is said to do his duty. He may do all this, and yet be greedy or cruel at home. There is duty but no virtue. The man who pays his poor rates does his duty, but he who spends money in a wise philanthropy rises to a virtue. The man who pays his own debts does his duty; but if he pays those of somebody else, he may perform a virtue. Hence we find a **duty** sometimes defined as **an action which ought to be done.** But all right actions ought to be done, yet all right actions are not duties. Eating and drinking are right acts, but as no moral impulse is necessary for their performance, we do not call them duties. For this reason duty has also been defined as **"those right actions or abstinences for the adequate accomplishment of which a moral impulse is at least occasionally necessary."** (Sidgwick.)

Yet duty and virtue overlap to some extent, so that at times it is difficult to draw the line between the two. A son contributes a reasonable amount to the support of his aged parents. He is simply doing his duty. But he may make sacrifice to render further assistance. This act would be a mere duty still in the judgment of some, but a virtue in the eyes of others. Speaking generally, **virtue may be said to be duty plus praiseworthy acts.** But there are praiseworthy acts which do not involve duty. A great act of public benevolence is a virtue if prompted by worthy motives; but it is hardly a duty in the accepted sense of the word, since we should not blame its omission.

Duties imply rights. It is my duty to obey the law, but it is my right to exercise the franchise. It may be my

duty to pay rent, but it is my right to live under sanitary conditions. We thus see that *duty involves obligation to some one else*. Again, if a child does not keep the rules of the school, the teacher will compel him. There is thus another person involved, and one who possesses the power of *compulsion*.

These considerations enable us to note the following distinctions between duty and virtue:—

1. Duty is conceived as distinct and explicit, whilst virtue is indefinite.
2. Duty is a fixed quantity. We may do less; we cannot do more. But virtue is elastic and ever rising upwards.
3. Duty implies a special obligation to somebody else. Virtue involves a general moral obligation to all.
4. Duty is always compulsory. Virtue is often optional.
5. Virtue is a wider term than duty, and yet it does not always include it.

CLASSIFICATION OF DUTIES.

Many classifications of the duties have been made, but a cross division is involved in most of them. **Plato** bases his scheme on his psychology, and gives as the four cardinal virtues *Prudence*, *Courage*, *Temperance* and *Justice*. **Kant** divides them into *Complete* and *Incomplete*. The moral duties of the **Jews** were embodied in the Ten Commandments, which teach our *duty to God and to Man*. The **Christian Moralists** give our duties to God, to others and to self; to which may be added our duties to the lower animals.

1. *Duties to God.* These are given as veneration, love and worship.
2. *Duties to Others.* Justice and equity; truthfulness or veracity in word; benevolence or love for one's neighbour.
3. *Duties to Self.* Self-preservation, prudence, temperance, purity, courage.
4. *Duty to Lower Animals.* Kindness.

Another scheme makes our duties to include:—

1. Respect for life.
2. For freedom.
3. For character.

4. For social order.
5. For truth.
6. For progress.

The more general classification now divides our duties into *Personal* and *Social*; *i.e.*, our duties to self and our duties to others.

HOW TO TEACH THE CHIEF MORAL DUTIES.

A good classification of the moral duties is an essential to their teaching, especially if that teaching is to be practical, attractive and economical. Feeling, intellect and will will need cultivation. The school discipline must be fashioned by it. The aid of literature must be invoked, the religious sentiment must be utilised, the force of example must not be neglected, and above all practice must be given.

1. **By Practice.** Children are weak in abstraction, and cannot easily form an abstract idea of duty. If the sense of duty is to be developed, it must be done concretely through the regular performance of certain duties. We acquire virtues by doing virtuous acts, and since they are often so closely connected, depending the one on the other, and mutually influencing each other, all are of equal importance to the teacher. The practice should not be limited to the cardinal ones, because in the school all should be cardinal. The practice of a duty, reinforced by the tender feelings, will gradually form the sense of duty not only to self, but to others. Then again, we must try to show the child that eventually duty and interest always point the same way. Experience, backed by observation, sooner or later teaches that honesty is the best policy, and so the conviction grows with the practice. It is therefore the teacher's duty to give a certain character to the activities, for as Aristotle points out, *the moral states depend upon the differences of the activities.* The practising of a virtue will also help to make it attractive. The child begins to see that truth begets confidence, love begets love, industry

duty) becomes attractive, because it is associated with pleasurable consequences. At the same time it must be impressed on the children that virtue is not practised because of its consequent pleasure, but because it is a *duty* to practise it.

2. **By Discipline.** The school discipline should be such as to steadily enforce a proper performance of all duties. For this purpose it will strive to work through conciliation, and not by fear. Severity will be necessary sometimes, but too much moral lecturing is apt to be looked upon by boys and girls as so much "jawing," and as such to be injurious rather than beneficial. This part of the subject is treated in greater detail in the next chapter.

3. **By Training the Intellect.** It has frequently been pointed out that knowledge is essential to morality. Many of the "wrong" acts of children are done in ignorance, hence there must be sufficient knowledge at least to decide as to right conduct. Socrates made *Virtue and Knowledge synonyms*, especially that knowledge of ends which leads to rational objects of choice. The argument rests on the assumption that each seeks his own good according to his lights, and in this way *Virtue or Right Conduct is made to depend on Knowledge.* Sidgwick also makes *Wisdom the supreme excellence*, so that from this point of view all the virtues are mere applications of it in special channels.

But *Knowledge alone is not virtue.* It is a great essential, but it is not the whole thing. *The element of Volition is wanting.* It is true that we must be wise enough to discern what is right, but if the process stopped there, no virtue would be shown. The intellect having furnished the judgment, the will must carry it over into action.

Much of the necessary knowledge may be acquired through the aid of suitable *Literature.* The moral instruction is absorbed almost unconsciously through the medium of the intellect. The moral is not too obvious, nor is it

aggressively thrust upon the readers. The result is that it starts trains of reflection which make for morality, because they are self-originated. A wide and attractive choice of good books should be allowed, and the reading should, so far as possible, be free from the ordinary restraints of discipline.

4. **By Training the Nobler Feelings.** The school offers many opportunities for the mutual display of good feeling. The children should be taught to be kind and helpful to one another, in fact the teacher's aim should be to turn his school into a sort of mutual aid society. The glow of satisfaction which follows the performance of a meritorious action, joined with the consciousness of increased respect and esteem, may gradually teach the children that giving is not all loss. Few of them will ever acknowledge that it is more blessed to give than to receive, but it is an ideal for continuous effort. Organised efforts may be attended with some success. Their chief advantage is that they help to minimise the difficulty of first efforts, and start the habit in its process of formation. The practice of collecting in some of the schools for the poor children's dinner fund, of voluntarily linking a high school with a poor board school for organised acts of benevolence, the establishment of penny banks, and kindred arrangements, are all more or less favourable to the growth of those feelings which underlie such virtues as benevolence, charity and thrift. But with younger children, in these early stages, a *quid pro quo* should be encouraged. A one-sided devotion generally dies early, and so is not a success for the growth of feeling.

Meantime the practice of courtesy, truthfulness, obedience and other virtues is steadily raising the feelings to a higher stage of moral strength. Humanity is developed by inculcating kindness to animals as well as to each other. Sympathy is evoked by genuine cases of distress, and a feeling of righteous indignation is encouraged against acts of meanness and cruelty. There is *one serious risk.* Aristotle

says that moral virtues depend on emotions and actions, and these admit of excess or deficiency. It is possible to go too far or not far enough in both. Virtue aims at the happy medium, and this is fixed by reason.

5. **By Training the Will.** According to Kant *virtue signifies a moral strength of will.* It is a disposition to do what morality prescribes. The will is therefore an important element. With young children, in their first efforts in the performance of duty, the will of the teacher is the controlling force. This is especially seen in teaching obedience. Hughes points out that "the will of a young child grows rapidly in responsive sympathetic submission to a superior will. As soon as possible the pupil should be led to a conscious, independent decision, in favour of the right course. Such decisions should be reached only in relation to duties immediately to be performed. The sequence for our moral growth is feeling, thought, decision, action. To arouse the first two, with reference to distant or indefinite duties, is a most dangerous practice. The first three steps are useless without the fourth. Every time a boy takes the first two steps without proceeding further, he strengthens the habit of neglect of duty; when he completes the first three steps without taking the fourth, he becomes weaker as an executive moral force."

IMPORTANCE OF A PROPER CLASSIFICATION OF VIRTUES.

The curriculum of most schools includes *set moral lessons*, and this makes the knowledge of a proper classification of the virtues not only wise, but necessary to the teacher. Classification promotes clearness and economy. It enables the teacher to grade his lessons so as to make the best use of the various stages of child intelligence and child morality under his treatment. It enables him to begin with the more elementary virtues, to describe them by simple names, to illustrate them with typical examples selected from child life, and to introduce the more complex

virtues at more suitable stages. It thus enables him to make proper allowance for the limited experience and the consequent weak conception of his pupils.

THE VIRTUES CLASSIFIED.

The following classification, which is largely based on Muirhead's,[1] is offered to the teacher as a good workable scheme without laying any claims to perfection.

A. **Moral Virtues.**

I. *Self Regarding.*

1. Purity.
2. Temperance
3. Courage.
4. Industry.
5. Prudence (including thrift).
6. Self-respect.

. *Extra-Regarding.*

1. Justice.
2. Benevolence.
    - (*a*) To the individual.
        - (1) Parental love
        - (2) Filial love.
        - (3) Friendship.
        - (4) Politeness
        - (5) Honesty
    - (*b*) To the district.
        - (1) Public spirit
        - (2) Etiquette
        - (3) Honour in business.
    - (*c*) To the country.
        - (1) Patriotism
        - (2) Loyalty to church or party.
    - (*d*) To humanity.
        - (1) Sympathy
        - (2) Philanthropy.

B. **Intellectual Virtues.**

I. *In the Pursuit of Truth.*

1. Sincerity.
2. Impartiality.
3. Concentration (a form of courage).
4. Accuracy.

[1] *Elements of Ethics*, by J. H Muirhead.—John Murray.

II. *In the Communication of Truth.*

1. Truthfulness.
2. Candour.
3. Proper reserve.
4. Consideration.

III. *In the Application of Truth to Life.*

1. Prudence (in a narrower sense; *e.g.*, a prudent housewife).
2. Wisdom (in a broader sense; *e.g.*, a wise counsellor).

JUSTICE.

Justice is very difficult to define with any great degree of accuracy; hence we can better try to say what it means than to give its definition. We know it is *the great principle on which society hinges*, and so we count it the first of our social duties. It is enforced by social and moral, as well as legal, sanctions. *Its essential idea is a kind of equality.* It demands an eye for an eye and a tooth for a tooth, it is no respecter of persons, and it is demanded of all for the benefit of each. It is connected with law, but is not necessarily the same thing, for law-breaking is not always considered unjust (duelling, gambling), and our sense of justice causes us to measure laws by its standard, and even on occasion to pronounce them unjust; and, speaking generally, *it means more than mere conformity to law.*

The common notion of Justice may be said to embrace three elements.

(1) **Equality,** by which is meant mere impartiality in the distribution or allotment of rights, duties, privileges and burdens; and in reparation for injury. This equality is not universal. Justice seems to be influenced by considerations of sex, social position, custom and education. The law does not demand military service of women, even in conscripted armies, yet we do not consider this legal inequality an injustice. Again, laws may be equally administered and yet be unjust. In former days the statutes regulating the wages of labourers were a case in point, and perhaps a modern instance is the treatment of joint (man and wife) incomes for the purpose of income tax.

(2) **Conservative Justice** is explained to mean the observance of laws and contracts, definite understandings, and the fulfilment of natural and normal expectations.

(3) **Ideal Justice** is that kind which is distributed according to a right or ideal standard. It is the standard to which the growing sense of justice is ever tending, but rarely reaching. There are two different conceptions of it, and so the standard varies. (*a*) The *Individualistic* view makes the realisation of freedom the ultimate end and standard of right social relations. According to this view "just value" is made equal to "market value," which is determined by free competition. (*b*) The *Socialistic* view makes the rewarding of desert the ultimate end, and denies that "just value" can be determined by mere competition. The requital of desert constitutes the chief element of ideal justice.

The Teaching of Justice. The teacher's chief task is *to reconcile the Conservative and Ideal Elements*. Justice is enforced by penalties when necessary, hence part of the teacher's duty is to make his children acquainted with these penalties. A more important part is the cultivation of the good and the eradication of the evil in the natural dispositions of the children, so as to make the penalties as much as possible unnecessary. In doing this the essential elements of this virtue must be kept in mind. Equality demands reciprocity, hence we must be just before we are generous. Then the whole school discipline must be based on justice if the children are to learn to honour and practise it, and especial care will be required in the use of rewards and punishments.

BENEVOLENCE.

The *general maxim* of benevolence is that *we ought to love all our fellow-men*. The will must be trained so as to produce a disposition to do good to others. This will necessitate the cultivation of the affections, for good actions are impossible without them. We thus see that there are two elements involved in it, which may be called :—

1. *The Internal Factor*—the cultivation of the affections in self.
2. *The External Factor*—the promotion of happiness in others.

Its wide range is indicated by the number of its synonyms. We speak of it as good will, doing good, beneficence, kindness, philanthropy, generosity, charity, self-sacrifice, devotedness, compassion and pity. We find it a really cardinal virtue, because so many others hinge upon it; *e.g.*, honesty is regarded by some as probity carried to the pitch of positive benevolence, and a reference to the table of classified virtues (p. 352) will further illustrate this characteristic.

It is more than justice, which can be demanded as a right, while benevolence must be freely given. Again, the duties of benevolence or affection are indefinite, whilst those of justice are very definite. Justice contains a retributive element, but there is no such factor in benevolence. Justice can be enforced by penalties, not so benevolence. Justice is based on equality and the requital of desert; benevolence demands no *quid pro quo*, and is based on affection and the doing of good irrespective of any direct consequences to the person who practises it. Muirhead calls it justice tinged with emotion, and its special function begins where justice ends.

The Teaching of Benevolence. Benevolence should be taught chiefly by *practice* and *example*. These are concrete means, which appeal more readily than *set moral lessons*, although the latter must not be neglected. The chief points in such lessons are to make them deal as much as possible with child life, and not to obtrude the application. Let it force itself upon the children. Practice will embrace little acts of kindness, the exercise of pity, compassion, sympathy to those in misfortune or distress; the display of courtesy and consideration to those around them, and the humane treatment of animals. For the latter purpose suitable lessons on natural history will be a great aid, as a lack of kindness is often due to ignorance. A knowledge of the true relation existing between justice and benevolence will also be valuable to the teacher.

The training must also recognise, and make due allowance for *the weakness of boyhood in tender feeling*. The period of childhood is more favourable than that of boyhood—the age of vigorous impulses and self-sufficiency.

An observation of boy life at this period shows very often a great lack of sympathy, a want of readiness to oblige, an absence of consideration for the misfortunes of others, and an occasional practice of the various forms of petty cruelty, which makes the work at this period so much harder. If kindness is shown it is often tainted with the element of reciprocity. This must be discouraged. The act should be retained, but the motive must be raised. The difficulty of the work is further increased because *no forcing can be done*, no reward can be given. The task must be steadily pursued through the cultivation of sympathy and the affections generally.

PRUDENCE.

Prudence is a kind of practical wisdom which leads a man to form the habit of looking ahead, of acting with deliberation, of heeding the teachings of experience. It has a wide application in the field of conduct. The industrious, the thrifty, the temperate and the circumspect are all called prudent. We also describe the cautious, the discreet and the considerate as prudent. Ricaby says that "**Prudence is the habit of intellectual discernment that must enlighten every moral virtue in its action.** If unworthy ends are intended, however sagaciously they are pursued, that is not prudence. We may call it sagacity or shrewdness, being a habit of ready discernment and application of means to ends. But *prudence discovers worthy ends only, and to them only does it provide means.*"

It is sometimes described as the duty we owe to ourselves, and *its chief characteristic is the highest regard for self.* It is this support of our own natural self-seeking impulses that marks it off from justice and benevolence.

The Teaching of Prudence. The means at the teacher's disposal for the cultivation of prudence will embrace several agencies, the most potent of which is perhaps *Experience.* Prudential motives spring out of the consequences which our actions entail upon us. Thus knowledge comes with experience. The imprudent act is associated with pain, the prudent with pleasure. Prudential motives then step

in, and induce the child to repeat the one and to avoid the other.

Imprudence is sometimes the result of ignorance and present impulse. Hence the necessity for *Intellectual and Volitional training. Instruction* will gradually remove ignorance, but impulse is more difficult to deal with. The impulsive child is often more or less impulsive to the end of the chapter. The difficulty is one of *Disposition*, and must be dealt with as such. Something may be done by *advice, guidance, control, example* and *an indication of consequences.* But the teacher's efforts must be focussed on *the formation of the habit of self-control.* This will entail the cultivation of habits of *reflection*, and a reasonable submission to *public opinion.*

THRIFT.

Thrift is *a form of prudence* which is of inestimable benefit, especially to the working classes. It encourages a spirit of healthy independence and self-reliance. It enables the workman to steer clear of those many present-day charities which tend so strongly to sap independence and self-respect. Many of the evils which afflict not only the working classes, but others, are the results of improvidence and waste, hence the teacher's task should be to train the children in some practical way to appreciate the advantages of economy, forethought and self-restraint.

The **practical teaching** could be best given by the formation of a **School Savings Bank.** *Economy is a habit, and must be learned by practice.* A regular depositor, on leaving school, will have learned a practical lesson in forethought and self-restraint, which will probably abide with him for life. It will also probably exercise a reflex influence on the household to which he belongs. Every expedient which encourages thrift has its educational value, but such devices as **Provident Clubs** and **Penny Banks** are not of much value in the formation of habit—the aim here—from their temporary and occasional nature. They are, however, good stepping stones to the more sustained effort, especially if the children can be induced to join more than once when the clubs, etc., are periodical.

A course of **Elementary Social Economy Lessons** will be valuable. The children might learn:—

1. How to economise slender resources
2. How to resist temptation to needless expense.
3. How to make reasonable provision for future contingencies

These lessons point to the close connection existing between thrift and **Temperance,** hence lessons on the latter would also be an aid. The practical teaching now given in connection with many of the board schools, polytechnics and institutes on such subjects as domestic economy, laundry work, housewifery and cooking will materially assist so far as some of the girls are concerned.

A course of **Elementary Political Economy Lessons** will be a further aid. These might include such subjects as:—

1. Simple lessons on money.
2. Simple lessons on the conditions which affect the rate of wages
3. On the relations of skill, prudence and knowledge to industrial success
4. On right ways of spending and saving.

TEMPERANCE.

This is said to be *the typical self-regarding virtue.* It involves moderation in all things, for a man may be intemperate in word, thought and feeling, as well as in appetite. But the reference is chiefly to bodily control. This self-control is a double duty—to ourselves and to others. Socrates estimated it so highly that he made it to be the foundation of every virtue. *Its maxim* might well be "*use and not abuse.*" Temperance does not mean abstinence, although it ought to be sufficiently strong to slip into the latter if occasion demands. Hence it must not be confounded with teetotalism, which has of late years specialised the use of the word temperance. Teetotalism may be regarded as an independent virtue. It embraces more than temperance, the element of self-sacrifice or self-denial often being present for the sake of example. Self-indulgence, which is a vice in itself, is no doubt largely responsible for other vices which taint society to-day.

The **teacher's work** is naturally limited in the teaching of this virtue, for home is the chief cause of its existence or absence. In school the chief work will be to cultivate a spirit of moderation, and this will be done by strengthening the will. Greediness, exaggeration, domineering and

kindred faults will need to be checked and rooted out, and good moral habits substituted in their place. The child will then leave school more or less potentially armed to practise temperance when occasion shall require.

COURAGE.

The virtue of courage is said to be only *a particular form of virtue in general.* Aristotle places it as a mean between foolhardiness and cowardice. It is a fundamental quality of character, and implies a readiness to meet danger. But the prompting motives must be suitable and sufficient, and there must be a reasonable expectation of, or belief in success. Otherwise, it degenerates into rashness or foolhardiness. A man may be courageous, and yet suffer the pain of fear. In fact *an element of fear seems essential for a display of real courage.* A man of great bodily strength and vigour may be daunted by no danger. He may face a danger unmoved which would seem more or less fearful to a man of weaker nerves and physique. If both pass through it successfully, the latter shows the real courage, because he subdued the fear inflicted on him by nature.

Courage is both *physical and moral.* Among the ancients it was physical only, but now the moral is recognised by some as equally important, although it is not always appreciated as such. The man who dares to do right irrespective of consequences, may be met with contempt, pity, ridicule or loss. But an act of physical courage always induces a certain amount of hero worship, even if the motive is not always adequate. But real courage, whether physical or moral, should always be esteemed, and receive proper recognition, and this is the principle which should guide the teacher in his handling of it.

Courage may be developed by **sound physical education.** This should not be confined to the field and the gymnasium. *Physical games and gymnastic exercises* are very valuable, but they should be supplemented by *advice and Object Lessons on diet and the rules of health.* The latter are equally essential for the production of bodily strength and

vigour, and largely affect the capacity for the former. Some one has remarked that it is easy to be courageous when the will has at command a body of iron and a muscle of steel.

Children should also be encouraged **to face difficulties** and to grapple with them. This will be good practical training for the will. The **removal of ignorance and superstition** will be another means. The fear of the strange, of the dark, of certain forms of insect life can be removed by a sympathetic and encouraging manner, by suitable explanatory lessons, and by good object lessons. But all aids are subsidiary to the chief one of facing difficulties, whether they be material or moral. In this way the teacher will gradually train his pupils to acquire that real kind of courage, which has been defined as "the form which individual and social virtue take in the presence of obstacles, both moral and physical, which are presented by the environment to the realisation of the common human good." (*Lux Mundi.*)

Summary.

Conduct. The performance of those actions which are definitely willed and adjusted to ends.

Character. Essential ingredient—fixity of disposition in right directions.

Defined as—

Consistency in willing and acting, both being subordinate to practical principles, which are ruled by one highest principle.

Phases of Development. Expressed in further definitions of character.

1. The sum of the hereditary instincts of the child.
2. The uniformity and firmness of the entire will.
3. The self-formed habits of the will.
4. A good or virtuous disposition of the feelings and will.
5. A completely fashioned will (a perfect moral character).

Home Influence on Character.

1. Home discipline is often impulsive.
2. Wrong motives are often appealed to.
3. "Mixed morality" is often taught.
4. False reasons are sometimes given for conduct.

School and Character.

1. Early attendance favourable to character for the following reasons :—
   (*a*) Few objectionable habits are yet contracted
   (*b*) No decided bent as yet is given to character.
   (*c*) The plastic nature of the children is an advantage.
2. The teacher cannot form character ; he can only aid.
3. Formation is the work of the child.
4. Instruction is necessary.
5. A kind and sympathetic, yet firm discipline is required.
6. Temperaments and dispositions must be studied.
7. Moral habits must be formed.
8. A proper classification of the virtues is necessary.
9. Also a correct apprehension of motives.
10. A good example must be shown.
11. School games must be utilised.

Character and Habit. Character is known by conduct; conduct is the result of habit; hence character is built out of habit, and is sometimes defined as a bundle of habits.

Character and Discipline.

1. Discipline is only an aid to character.
2. Its weakness is that it rests on authority, and this may be unfavourable.
3. Discipline should be liberal, rational, opportune, kind, encouraging and exemplary if it is to build up character.

Character and Feeling.

Goodness is an affair of the sensibility, hence the feelings of children must be studied, and this is best done through their play.

Character and Intellect.

1. The cultivation of character includes the cultivation of all the powers of the mind.
2. Intelligence is essential for virtue.
3. The teacher's work is to cultivate the habit of reflection.
4. Certain school subjects lend themselves specially to the teaching of certain virtues.

Character and Will. Character is a completely fashioned will.

Motive and Intention.

1. *Motive.* The motive of an act is that which induces us to perform it.
2. *Intention.* The intention is the end which it is purposed to bring about.

Importance of a Correct Apprehension of Motives.

1. Motives are incentives to the will.
2. Volition follows the strongest motive.
3. A correct apprehension enables a more effective dealing with the difficulties which arise from disposition.
4. A correct apprehension enables the teacher to select suitable motives. These vary with the age.
   - (a) *Motives for Childhood.* The motives chosen will be such that their influence can be felt quickly
   - (b) *Motives for Boyhood* The characteristic of this age is one of vigorous impulse and self-sufficiency, and the selected motives must be most suitably adapted to deal with this characteristic
   - (c) *Motives for Youth* The characteristic of this age is a growing sense of duty; hence the selected motives should appeal to this sense.
5. A correct classification involves a correct apprehension.

Classification of Motives. (Whewell.)

1. Appetites (bodily desires).
2. Affections (towards persons).
3. Mental desires (abstractions).
4. Moral sentiments (connected with judgment of right and wrong).
5. Reflex sentiments (connected with self).

Temperament. "Any marked type of mental constitution and development which seems due to inherited characteristics of the bodily organism." (Ladd.)

Varieties of Temperament.

1. *The Sanguine.* Feelings generally uppermost. Prevalent among children.
2. *The Choleric.* Will generally uppermost. Prevalent among the middle-aged and the successful.
3. *The Phlegmatic* (or Lymphatic). The volitional element is generally one of two extremes. The temperament of old age.
4. *The Sentimental.* Lively imagination and great sensibility. Feeling always strong; volition generally weak.
5. *Mixed Temperaments.* Probably no pure type of any of the above classes exists. Most people, at least, are mixtures of two or more classes.

Temperament in Education.

1. The temperament of each child should be studied.
2. The sanguine and sentimental will give little or no trouble as regards discipline.
3. The choleric and lymphatic need careful handling.
4. The sanguine requires but little stimulation.

Disposition.

1. Disposition equals a total of the inherited active and emotional tendencies.
2. Dispositions are classified into:—
   - (*a*) *The Callous.* The sympathetic instincts are weak or wanting.
   - (*b*) *The Excitable.* There is a lack of prudential instincts; and of those present, none are very stable.
   - (*c*) *The Energetic.* The practical instincts are well developed.
   - (*d*) *The Sluggish.* There is a lack of moral instincts.

Duty and Virtue.

Duty.	Virtue.
1. *Definition.* Those right actions or abstinences for the adequate accomplishment of which a moral impulse is at least occasionally necessary	1 *Definition.* Virtue is duty plus praiseworthy acts.
2. Duty is conceived as distinct and explicit.	2. Virtue is indefinite.
3. Duty is a fixed quantity	3. Virtue is elastic and ever rising upwards.
4. Duty implies a special obligation to somebody else.	4. Virtue involves a general moral obligation.
5. Duty is compulsory	5. Virtue is optional.
6. Duty is less than virtue.	6. Virtue is more than duty.

Classification of Duties.

1. Duties to God—veneration, love, worship.
2. Duties to others—justice, equity, truthfulness, benevolence.
3. Duties to self—self-preservation, prudence, temperance, purity, courage.
4. Duty to animals—kindness.

How to Teach the Chief Moral Duties.

1. By practice.
2. Through discipline.
3. By training the intellect.
4. By developing the nobler feelings.
5. By training the will.

Justice. Difficult to define.

1. It is the great principle on which society hinges.
2. Its essential idea is a kind of equality.
3. It means more than mere conformity to law.
4. Elements commonly given as:—
   - (*a*) Equality.
   - (*b*) Conservative justice.
   - (*c*) Ideal justice.

(1) The individualistic ideal.
(2) The socialistic ideal.

5. Teacher's chief task is to reconcile the conservative and ideal elements.

Benevolence.

1. *Its General Maxim.* We ought to love all our fellow-men.
2. *Elements.*
   (*a*) Internal factor—the cultivation of the affections in one's self.
   (*b*) External factor—the promotion of happiness in others.
3. It is more than justice, *e.g.* :—

Benevolence.	Justice.
1 Must be freely given.	1. Can be demanded as a right.
2. Its duties are indefinite.	2. Its duties very definite.
3. No retributive element.	3. Contains a retributive element
4. Cannot be enforced by penalties.	4. Can be enforced by penalties
5. Based on affection	5. Based on equality.

4. It should be taught by means of practice, example and set moral lessons.

Prudence.

1. *Chief Characteristic.* The highest regard for self.
2. *Its Limits.* "It discovers worthy ends only, and to them only does it provide means."
3. *Definition.* "The habit of intellectual discernment that must enlighten every moral virtue in its action." (Rickaby.)
4. Taught by means of :—
   (*a*) Experience, including example and public opinion.
   (*b*) Instruction—to be adapted to disposition.
   (*c*) The formation of the habit of reflection.
   (*d*) The formation of the habit of self-control.

Thrift.

1. A form of prudence, exalted into a separate virtue.
2. Taught by such means as :—
   (*a*) The formation of school savings bank.
   (*b*) Provident clubs and penny banks
   (*c*) Elementary social economy lessons.
   (*d*) Lessons on temperance.
   (*e*) Elementary political economy lessons.

Temperance. A form of prudence.

1. The typical self regarding virtue.
2. Its maxim—use and not abuse.

3. It does not necessarily mean abstinence.
4. It is the mean between abstinence and indulgence.

Courage.

1. Said to be a particular form of virtue in general.
2. An element of fear essential for a display of real courage.
3. It is taught through .—

(*a*) Physical games and gymnastics.
(*b*) Advice and encouragement in facing difficulties.
(*c*) Lessons on diet and the rules of health.
(*d*) The removal of ignorance and superstition.

QUESTIONS.

1.—Show how important in developing character is a proper classification of the virtues, and a correct apprehension of the motives. (E.D.)

2.—Compare the discipline of the school and the discipline of home in the formation of character. (E.D.)

3.—Explain how you would teach by a course of special lessons the chief moral duties in school, and how you would render them practical and attractive. Classify the duties to ourselves you would inculcate. (E.D.)

4.—What is meant by moral character? In what different ways can a teacher help to form a right moral character in his pupils? (E D)

5.—Give an analysis of the notion of character. bringing out (*a*) the psychologically distinct factors in it, (*b*) the more general and important phases through which the formation of character proceeds. (L.U.)

6.—Show how the training of character at school sharpens the intellect, and conversely, how orderliness of reason reacts on character. (L.U.)

7.—In what way is the discipline of a school best fitted to develop moral character? Show how the result is likely to be affected (*a*) by differences in the temperament and disposition, and (*b*) by differences in the mental capacity and standing of the pupils (L.U.)

8.—Explain the doctrine that moral habits are the results of repeated acts of choice, and point out its bearing on the training of the character. (L.U)

9.—What do you mean by temperament? Attempt a classification of the more ordinary types of temperament, and consider each in reference to the excellencies and defects of character which it tends to produce (E.D.)

10.—What do you understand by a good moral character? To what extent can this be developed in early life, and how much can the educator do to further its development? (C.P.)

11.—What motives should a teacher mainly rely on between the ages of six and twelve? Give reasons for your reply. (C.P.)

12.—In what does character consist? How would you cultivate it? (C.P.)

13.—What motives should a teacher appeal to in stimulating his pupils to work and to be well conducted? How does the age of the pupils enter into this question? (C.P.)

14.—What is meant by the forming of character, and to what extent is this part of education the work of the teacher? How is the problem of forming a good character affected by the individuality of the child? (C.P.)

15.—What do you understand by moral character? Explain what is meant by saying that the formation of character includes the cultivation of all the powers of the mind. (C.P.)

16.—What motives to conduct would you chiefly rely on at different stages of education? Give your reasons. (C.P.)

17.—Which of the moral qualities are most likely to be imperfectly educated by a public school training? How would you seek to correct the defect in the case of some one of the qualities you have named? (L.U.)

18.—In writing or supervising the terminal reports or characters of pupils, what are the chief considerations that should guide a head master? (L.U.)

19.—Character has been defined as "a completely fashioned will." What does this mean? (E D.)

20.—Explain and criticise the dictum, "Volition follows the strongest motive." Show how you would illustrate the principle in discipline. (E.D.)

21.—Give a clear account of the relation between motive, desire and will. Illustrate by indicating the effect and discussing the value of some system of rewards. (E.D.)

22.—It has been laid down as a principle of discipline that "voluntary dispositions are to be trusted as far as they can go." Discuss this. (L.U.)

23.—Name some special difficulties which teachers have to encounter under the head of "disposition," and show how you would attempt to deal with them. (E.D.)

24.—Write a short account of moral character, and say what the teacher has to do with it. (C.P.)

25.—What is meant by character, and how is it formed? Briefly discuss the proposition that the supreme end of education is the formation of character. (C.P.)

26.—Briefly explain and show in what way education is concerned with moral character. (C.P.)

27.—Contrast the conceptions of virtue and duty, and inquire how far their application coincides (V. U.)

28.—Discuss the meaning and value of the statement, "Character is a completely fashioned will." What means are available in a school for training the will? (V.U.)

CHAPTER XXIV.

DISCIPLINE.

DISCIPLINE DEFINED.

A great variety of meanings is now attached to the word discipline, hence it is not easy to define it from the teacher's point of view. It is more than *instruction, drill* or *order*. It is more than the *teacher's influence over the children*, for that influence may not be good. It embodies *rules of government*, and claims *subjection* to those rules. "The most perfect are those who have their passions in the best discipline." It means more than *chastisement*, or *correction*, although it is often used in this sense. Its chief characteristic is that **it is a force for moral training.** It is the natural trainer and corrector of character, and should embrace the control, regulation and guidance of all those forces which contribute to the growth of character.

OBEDIENCE.

Discipline involves obedience, and the learning of this is the first step towards the acquirement of moral habits by the child. School is impossible without it. Its first stages are difficult with some children, because it demands self-submission and self-control. The child has to learn to imitate movements at sight, to promptly respond to the word of command, to act on a wish. The duty of obedience must be learned before school work is possible, and it must be obedience of the right kind. The motives indicate the kind.

1. **Slave Obedience.** This is such obedience as a slave gives to a master; a dog to a whip; a horse to a spur; a child to the cane. It produces a state of terror, and often paralyses the will. *The motive is weak*, for it generally springs from a hope of favours to come; or from fear of some punishment. It manufactures a fair proportion of hypocrites.
2. **Mechanical Obedience.** This becomes involuntary and affords a starting point for the child—but a starting point only. There is no why or wherefore offered. The obedience is demanded, and it has to be given. It is prompt in its nature, and is brought about by a perfection of drill. Repetition fixes it. There is no cruelty necessarily attached to it, and no fear. It is a matter of habit pure and simple, such as one sees in the army, navy and certain schools. It is pleasing to look at because of its smartness. It is always mechanical, and often unsympathetic. It should not be practised too long, for *its failing is that it leaves the character weak*, and the child is launched into the world subject to all the dangers which threaten a weak will.
3. **True Obedience.** This only comes by slow degrees, for it involves both *intelligence* and *self-control.* It is based on *affection*, for a child obeys cheerfully where he loves. It also takes advantage of the *sense of dependence* in children. This produces a *disposition to obey*, which the teacher skilfully uses. It depends on a cheerful recognition of the moral and physical *superiority of the teacher*, and gives rise to a submissive feeling, which the teacher detaches from its connection with himself, and transfers to the law of which he is the representative. It thus becomes a *moral habit* in the process of time, which habit is said to constitute the one chief virtue of childhood. Its great recommendation is that *it subdues the will without weakening it. Authority* is invoked, for the teacher is *in loco parentis*, and like the parent, he must prove himself the friend of the scholar. Finally the obedience is claimed on the ground that it is right to yield it.

AUTHORITY.

Obedience and authority are relative terms, for there cannot be one without the other. Its justification is that it helps in the growth of reflection and the formation of moral habits. It inflicts a less to avoid a greater pain. It

does not exist for the benefit of the governor, but of the governed. It does not represent the personal desire of the teacher, but a principle of government. It may resort to physical means, but it should always be wielded for a moral purpose. *It is not an end, but only a means.* Bain points out that *its operation is a necessary evil*, for it abates human happiness, restrains free agency, inflicts pain on others, and may develop into tyranny. The *sense of authority* in a child arises primarily from his feeling of helplessness and dependence. Heredity helps; but the chief factors are education and experience. On the teacher's or parent's side, a wise and sympathetic rule favours the growth of this sense; on the child's side experience soon teaches him that there are necessary limits, imposed by others, to his free agency; and custom is ever confirming this lesson. Sooner or later he learns that authority carries with it the power to punish. The teacher's task is to see that the restrictions imposed are limited to the smallest effective penalties possible.

MORAL DISCIPLINE.

With children moral discipline is rarely, if ever, self-imposed, so that it may be said to involve authority. *Physical compulsion is not Moral Discipline*, for in itself it is not moral. The teacher's task is to show that obedience is a necessity, and at the same time to invest that obedience with moral attributes. He will do this by gradually enabling the child to see the reasonableness and justice of that necessity. As soon as this is achieved the child's respect for authority will grow in strength and intelligence, until he is able to attach it to the law rather than to the person enforcing that law, as previously pointed out. He will then yield a ready submission to those moral rules which are laid down and enforced for his benefit, and for the formation of his character.

The whole of the school work and discipline may be made to aid in moral training, because it can be guided for the formation of habit and character. Too much must

not be expected, because of the peculiarities of school life. School life is very short, and in primary schools it only embraces about one-third of the waking day. In the school itself the chief attention is generally, and almost of necessity, centred on intellectual rather than moral training; and the numbers gathered in a school are at least as much a disadvantage for the purpose of moral training as an advantage. The strong personal affection of home life is necessarily weakened, and there is no moral force within the school which fully compensates for this.

The exercise of authority in prohibiting certain acts is not discipline. It has been pointed out by some one that the "don't," and "slap," and "naughty" of the parent and teacher is not moral training, because it does not point out what is prohibited in the action. The teacher, as a ruler, is an imposer of *general* rules, which instruct the child how to act in a given class of cases.

We have seen that discipline involves obedience and authority, and so may contain an element of pain. Moral discipline, although demanding the aid of discipline in general, is nevertheless a more special use of the word. It involves education, moral and intellectual, as distinct from mere order and instruction; hence it has been defined as **subjection to the teacher's authority in accordance with the order which has been prescribed for educational ends.**

SCHOOL DISCIPLINE.

School discipline implies government by rule. Rules impose restraint, hence they should be as few as possible. The assent of the pupils is necessary, and this is best gained by kindness. It is more profitable to persuade, to advise and to instruct than to compel, although that may be necessary at times. School necessarily seeks to cultivate the intelligence, but a wise discipline does not appeal to it until it has attained some degree of strength. Obedience is mechanical at first; it only becomes rational by experience

and education. A child's intellect is not capable of adequately measuring his duty. For this reason the teacher does not rely on it for first efforts. He rather seeks to form a habit of obedience, and so he makes his commands reasonable, and appeals to affection as a motive. Meantime he utilises the whole machinery of school life in his disciplinary efforts. Drill, marching, music, assembly, dismissal, change of lessons and every incident in the school programme are conducted and regulated with a due regard for discipline. Good drill and good order both indicate good discipline, but the practice of doing honest work, of rendering cheerful obedience and other kindred virtues, indicates a good moral discipline; and this is what discipline should mean to the teacher.

School discipline depends on certain powers of the teacher, as home discipline depends on similar powers of the parents. But *the teacher's authority is more limited than the parent's.* His position is different in several respects. There is *less affection* than in the home, owing to the large numbers he has under his care. Hence he is deprived in some measure of his most powerful motive. Again, *the sense of dependence is not so great,* for the teacher neither boards, lodges, nor clothes his pupils. *His rule rests on justice* rather than affection, whilst the converse is the general rule at home. It is important for the teacher to remember these facts, for they limit the range of his moral influence and his power to punish. The teacher may stand legally *in loco parentis,* but he is a handicapped substitute. On the other hand, the teacher is a trained ruler—or should be; the parent is an amateur. The teacher represents a wider authority, exercises a larger control, and so works very often with great weight and effect. He has the force of "public opinion" to assist him, and his official position is more apt to impress the mind of the young child. It is probably such facts as these that have led some authorities to assert that *public education surpasses domestic education as a means of strengthening character, and developing energy and the manly virtues.*

HOME DISCIPLINE.

Home brings the child his first experience of authority, and his position makes him very amenable to its influence. The young child is a bundle of appetites; home gratifies many of them. He is a self-pleasing creature; home humours him more than school. At home he gets affection first very often, and justice afterwards; at school the order is reversed. At home he is one of a very few; at school he is one of a large number. *The parental instinct is the ruling force at home; the sense of duty in the school.*

Home discipline is thus associated with sustenance, affection, greater liberty, greater appreciation and greater indulgence. *The motives to conduct are fewer than in the school,* and they are mostly personal. *Home gives the parent more opportunities,* both from his superior natural position and a greater amount of time. His kindness, care and anxiety, combined with the child's dependent position, appeal to gratitude and love, which are strong motives to obedience. School life necessarily runs in restricted grooves; home life is freer and more expansive. The result is that *home relations tend to develop more moral habits than the school.* Home influence is the mightiest force in the formation of character. Where that influence is good the teacher's work is merely supplementary and easy; where it is bad it is difficult, for the teacher's influence has to destroy before it can build.

THE DISCIPLINE OF CONSEQUENCES.

A nurse, seeing a child run from her side toward the kerbstone, declined to stop it, preferring that he should fall, so that he might gain experience. Again, a little girl was running down a steep hill, to whom a lady, walking with her mother, called out, "Take care, my dear!" The mother answered, "Let her alone; she must learn wisdom by experience." This gaining of experience, or this learning wisdom by experience, is what is meant by the discipline of consequences. Its principle is that *natural punishments are*

best where available. Its great advocates are Rousseau and Spencer. The former wrote an educational work called *Émile.* Émile in a fit of anger breaks a window pane in his room. Rousseau would punish him by keeping him there to catch cold. Nothing but physical obstacles or punishments, which result from the actions themselves, and which he will recall on occasion, are to be offered to the individual wishes of the child.

I. **Advantages;** chiefly summarised from Spencer.

1. *The punishment is a natural one.* It is seen to be the effect of a given cause, and the power to recognise cause and effect is an aid to moral training. "Proper conduct in life is much better guaranteed when good and evil consequences of actions are understood, than when they are merely believed on authority."
2. *It sets up a right moral standard,* and so dispenses with a system of rewards and punishments, which is radically wrong.
3. *It is a discipline of pure justice,* and will be recognised as such by every child. Where suffering follows naturally as the result of misbehaviour the feeling of personal resentment and a sense of injustice are absent.
4. *It minimises the risk of a display of temper* by removing the personal and authoritative element.
5. *It does not hamper the child's sense of freedom* like the imposition of a set of rules. It is a principle of moral training to gradually widen the child's freedom, hence the fewer restraints that must be imposed the better.
6. *It strengthens the influence of the teacher and parent* by making the relation between them and the child more friendly. It relieves from the necessity of penal inflictions, and so prevents mutual exasperations and estrangements, which sometimes endure out of all proportion to the occasion.
7. *The penalty follows quickly* as a rule, and is therefore more effective.

II. **Disadvantages.**

1. *The penalty is not always available,* especially where the action would have to pass into habit. The drunkard is not always punished with a headache or by indigestion. Appetites are said to feed on themselves, so that consequences become inoperative,

2. *It is not always suitable.* Self-indulgence may ruin the health, and a theft may lead to a prison.
3. *The penalty may be too remote.* It is no good telling most children "you will suffer for this some day." As some day is not to-day the warning falls unheeded.
4. *The penalties are often disproportionate.* The two little children might have seriously injured themselves, and, as Compayré points out, Émile might have got pneumonia. We cannot let children get wise by experience of this sort.
5. *The penalty may be insufficient.* Tight-lacing brings many evils in its train, but it still exists. Drinking and gambling cause untold misery, but they are still prevalent vices. Again, this form of discipline is quite insufficient in the first years of school life, for natural impulses require restraining, and the natural consequences of wrong actions cannot be relied on.
6. *The chief penalty may fall on others.* A boy smashes a window or robs an orchard, and his father may have to pay. Conversely, the sins of the father may be visited on the children, even unto the third or fourth generation.
7. *It rests on a false principle.* Compayré points out that it is based on the idea of the imminent justice of things. But natural justice is often at fault. It implies that it is not necessary to introduce into education moral ideas, such as ideas of duty and merit; and that it is sufficient to leave the children in the presence of their interests while subjecting them, not to the authority of the moral law, but merely to the blind and unconscious forces of nature. In other words, the system is physical only, and lacks the moral element. The teacher should only use it where it is available, suitable and just.

DISCIPLINE AS INFLUENCED BY TEMPERAMENT AND DISPOSITION.

Elasticity is a mark of good discipline, and this elasticity is rendered necessary to meet the varying temperaments and dispositions among the scholars. The motives to obedience are both external and innate. The latter are an index to *the voluntary dispositions* of the children, *and these should be trusted as far as they will go.* But it is a mistake to trust to them alone, for in most children they are not sufficient for the purpose. Even those that are present

may be too weak or too irregular in their action to wisely influence conduct. A further difficulty arises from the fact that different children are influenced by different motives. For further information on this subject the reader is referred to "Motive," "Temperament" and "Disposition" in the chapter on "Character."

CONDITIONS FAVOURABLE TO DISCIPLINE.

These include:—

1. **The Personality of the Teacher.** This should be *pleasing*. The voice, eye, dress, bearing and manner will all need attention. A certain *formality and dignity* should be maintained, as it aids his influence and generates a certain amount of advisable awe. A *quiet manner* is very essential. It indicates that obedience is expected, and gives the impression of a reserve of strength. In *the exercise of authority* he should be firm, kind, prudent, impartial, patient and uniform. A lax discipline means frequent punishment, irritation and incompetency. *Example* is a great former of character. *Imitation* is a strong impulse in childhood. It is often said that the child is as the teacher, and this is sufficiently true to be called a scholastic truism. Imitation proceeds most easily where the given action falls in with the natural bent of the child. Dispositions may be put into a few classes for text-book convenience, but in practice they shade off into as many differences as there are children. This is an important fact from the point of view of example, hence the teacher should be careful of his own conduct. Good conduct involves self-denial very often, and therefore is not so readily copied. The *motive* to copy it must include affection as well as the recognition of the teacher's power.

2. **Good Physical Surroundings.** These also are essential. The school buildings should be roomy, airy, well furnished, well lighted, well ventilated, clean, attractive and well planned. They should include good playground accommodation, easy and convenient means of egress and entry, clean, sanitary and suitable offices and cloak-rooms,

3. Good School Management. This will include good organisation and classification, a due alternation and remission of work, good methods of teaching, the arousing and maintaining of interest, thorough supervision and a good system of drill.

4. A Good System of Government. All *duties and offences* should be expressed in simple, clear and precise language. The *rules* should be few and well understood. *Commands* should be well considered before they are given, and then there will be no need for retraction, which is a sign of weakness. Prohibitions are more successful than commands. They arouse less hostility, for they seem to restrict the child's sense of freedom less than positive commands. *Offences* should be graded, so that the consequent punishments may be graded also. The *reasons for discipline* should, in the case of the older scholars, be made intelligible, for knowledge breeds confidence and tends to obedience. Proper facilities should also be provided for carrying out the rules. A right use should be made of *punishment*, which should be corrective rather than retributive. *Over-government* should be avoided. It is the antithesis of feeble government, and is as much to be condemned. Good government should concern itself chiefly with representative faults, and should not waste itself over details. *Rewards* should be handled judiciously, and *a good class opinion* should be cultivated. If *the sense of freedom* is to grow, as is necessary, the child's circle of freedom must be gradually extended, and this can be safely done in a variety of ways. Some of these have already been pointed out, and in addition the child should always be trusted within reasonable limits. In this way he will learn to respond to the confidence placed in him, and will gradually recognise that rational conduct conduces to general comfort as well as personal progress.

CO-OPERATION OF PUPILS.

Speaking roundly, the conditions which are favourable to discipline are the best aids for gaining the co-operation

of the pupils. This co-operation may sometimes be turned to practical account by enlisting the aid of the older children for the purposes of discipline. Their *example*, like that of the teacher, is very influential with the younger scholars. Admiration and esteem, and even a certain amount of awe, are generally manifested by the younger to the older ones, and they generally evince great pleasure at recognition or notice by their seniors. A certain amount of *supervision* could thus be exercised by the older scholars to aid in the maintenance of discipline, both inside and outside the school. They can share the games of the younger ones, or they can control them. They can act as monitors, assist in regulating assembly and dismissal, and generally hold a light controlling hand over their younger school-fellows.

ENDS AND GROUNDS OF EARLY GOVERNMENT.

The unformed minds and characters of children make them the proper subjects of authority and command, and the teacher's relation to them reveals the ends and grounds of early government. *Obedience is the law of a child's being.* His weakness, mental, moral and physical, makes government absolutely necessary. The discipline of consequences is not always available; hence *the child wants protecting against himself* as well as against others. This is one aim of early government. Another is *to form good habits*, by leading action into right channels. Herbart considers that the purpose of government is not really to form character, but merely *to keep order;* it is not to make better, but only for the nonce to deter. It aims at order for the moment. If government succeeds well, the pupil unconsciously accustoms himself to punctuality, order, etc. These qualities he calls *mediate virtues*, because in themselves they are not yet good; but by the method of their application, they may contribute to the promotion of the good. To make them good, the motive has to be good; for a criminal may be diligent, but the motive may be

probably anything but good. Thus government has to consider the motive as well as the act. It has *to prevent as well as correct and punish.* Hence it will seek out the sources of wrong desires and stop them; it will give *facilities for the active powers of children*, and it will see that their physical surroundings are good.

NECESSITY FOR PUNISHMENTS.

Children, like the great majority of mankind, require *restraint.* All forms of government are supported by the sanction of punishment, and in school it is absolutely indispensable, for there could be *no law and no government without it.* Punishment is bestowed *to make a child rational or obedient in conduct. The object is to form good habits*, and, if possible, to get the children to form them willingly. Punishment may be necessary as a *stimulus* now and then, but the less the punishment, the better the government. The teacher's will is substituted for the child's, and the teacher's aim is to get a free recognition of this.

NECESSITY FOR REWARDS.

Government is dependent on rewards as well as on punishments; and, like punishments, they constitute a natural and necessary sanction of law. In school life, they are considered to be indispensable. Discipline demands self-restraint from children, and *some stimulus is required* for the many and necessary efforts which have to be made. All children are fond of *pleasure;* rewards appeal to this feeling, and so act as a positive inducement. Again, owing to their *limited mental capacity*, the reasons for a rule cannot always be made plain to them. With older children, even when the reasons are available, *they are not always effective;* hence some attraction is needed. The same is true of their *social feelings.* These also are too weak to be operative as motives, and so have to be assisted by artificial means.

There is a distinction between a reward and a benefit. Hooker points out that "*Rewards and Punishments do always presuppose some*

thing willingly done well or ill; without which respect, though we may sometimes receive good, yet then it is only a benefit, and not a reward."

KINDS OF PUNISHMENT.

I. **Principles of Selection.** Punishment is founded on a sense of honour, hence no kind that has a tendency to weaken this sense should ever be used. It is the corrective and formative element that requires attention. The punishment must not convey the idea of lasting disgrace, or all incentive to improvement is checked and character suffers. This makes the choice of kind important. It should have *degrees of intensity and duration*, as in the case of fines, detention and censure. So far as possible, it should have *equal application* under all circumstances. It should be *adequate*, not excessive or deficient. It should be *exemplary*, so that it may profitably influence others. It should tend to *reform* by weakening the seductive, and by strengthening the preservative motives, as in forming habits of industry in the idle. Where necessary it should be made to grant *compensation*, as in making children pay for damage to property, or in making up for neglected lessons. It should be within the grasp of child *intelligence*, have the support of *school opinion*, and be capable of *remissibility*, as in the case of a mistake. It should be *present, or near*, for the remote has little or no influence with children. For first offences it should always be *slight*, and in early childhood it should be *short and sharp*. Where natural punishments are available they are generally the best, as is explained under the head of "The Discipline of Consequences." Where possible a distinction should be drawn between moral offences and breaches of discipline, for the latter may often be regarded as minor offences, and can be adequately dealt with by routine punishments.

II. **Kinds Available.**

1. *Censure.* All forms of censure may be used, because they are the first, most ready and best. It needs grading, both for

offence and for disposition, and it should be used sparingly at all times, otherwise it may degenerate, in the opinion of the children, into "nagging" or "jawing," and then its moral effect is lost Strong terms should be used even more sparingly. Righteous and controlled indignation is a powerful weapon, which should be reserved for special occasions.

2. *Disgrace.* The school offers ready and simple forms of this punishment, like *Isolation*, *Bad Marks* and *Class Degradation*. These forms appeal to the sense of shame, which is powerful with some. They depend for their value on the sensitiveness of the pupil, and the influence of class opinion. They are not suited to great offences, and so are generally useful for first offences only, for they lose force by repetition. Isolation is useful, for it opens the child's eyes to the fact that he is a social unit, and dependent on the society of his fellows. Boys are gregarious animals, and this form of punishment soon opens their eyes to the fact.

3. *Detention.* The stopping of play, and the loss of liberty are very painful to children. Hence detention should be used for great and habitual offences like riotous behaviour and unpunctuality. The punishment has the merit of being a natural one. The unregulated impulse to activity is met by withholding its ordinary legitimate outlets. Bain considers it a bad form of punishment.

4. *Deprivation of Pleasure.* Where applicable the deprivation of some form of pleasure is efficacious. There is another application of this punishment which is recommended by Locke. Take the offence itself, and dose the offender until he is salted with it. This is saturation and not deprivation.

5. *Tasks and Impositions.* Here the pain lies in the weariness produced. There is also the irksomeness of confinement. They might be used for neglect of lessons, for unpunctuality, for inattention, and for disobedience. But there is a strong division of opinion about their value. It is asserted, and with some truth, that they create a distaste for school work, and so while checking one evil, they produce another. By some they are even considered barbarous.

6. *Expulsion.* This should be a last resource. The failing is that it is not always available in an elementary school, and is, even when available, a mere shirking of a difficulty.

CORPORAL PUNISHMENT.

This is perhaps the most vexed question in the whole range of school management. Some never use it at all, and many schools are conducted with a minimum amount. Experience has shown in many cases that where the knowledge exists that it *may* be used, there the necessity for its use is very much lessened. Where it is used, it should only be *as a last resource, and in certain cases only*. Two or three times have been laid down as a limit. If still inefficacious, *removal* should then be the next step. The weakness of this alternative is that it is not always available. In the elementary schools of England a child cannot always be expelled. Then again, it is no solution of a difficulty, but a mere shelving or transference of it to somebody else.

When used for trivial cases it shows the teacher to be irrational, cruel and incompetent. Under no circumstances should it be *violent*, nor should it be administered to any part of the body where *permanent injury* may result, or the health be injured. Nor should it *offend against the sense of modesty*. It only *degrades those who have arrived at a sense of honour*, hence *age* and *sex* need to be considered. It has been recommended that incorrigibles should be sent to *Reformatories* and *Industrial Schools*, but such institutions are not available for faults of discipline. They are reserved for a worse class of offenders.

If punishment is given, it must be given in a right spirit. The punishment itself should be accounted *a great disgrace* both to those who endure it and to those who witness it. It should also be regarded as a *painful process to those who punish* as well as to those who suffer. In this way the moral aspect will be gradually impressed on the offender. The special aim is to get the child to reflect, to recognise the evil of his offence, and to admit it by condemning it.

Rosenkranz, speaking on this subject, says that provided it is not too often administered, or with undue severity, it is *the kindest method of dealing with wilful defiance*, with obstinate carelessness, or with a really per-

verted will, so long, or so often as the higher perception is closed to appeal. Other forms are cruel. He furthermore says that the view which sees in the rod the panacea for all the teacher's embarrassments is reprehensible; but equally so is the false sentimentality, which assumes that the dignity of humanity is affected by a blow given to a child, and which confounds self-conscious humanity with child humanity, to which a blow is the most natural form of reaction, when all other forms of influence have failed.

AMOUNT OF PUNISHMENT.

It is very difficult, from a variety of reasons, to specify the exact amount of punishment for any particular offence, but there are a certain number of considerations — here chiefly condensed from Bentham—which will operate as an aid. The amount, so far as possible, should be regulated by its probable effect as a *deterrent* and *corrective* force.

1. **As a Deterrent.** Whatever punishment is chosen, it should be sufficient to clearly outweigh the profit of the offence. This will check all such prudential considerations as weighing the risk against the gain. Speculative immorality must be killed. When faults vary in degree, the punishment should be such as to make the less preferred; *e.g.*, truancy and lying should be punished more severely than mere truancy. But in either case there must be no excess; the penalty must only be just great enough for the purpose. Then again, the less certain a punishment is, the greater it should be; and the same is true of remote penalties. And generally the teacher must have regard to the secrecy of the offence and the consequent difficulty of detecting it.

2. **As a Corrective.** Speaking generally, each case should be considered on its merits—or demerits rather. There may have been provocation, or there may have been mitigating circumstances. The teacher's task is to supply suitable motives of a conflicting nature and of adequate strength. Hence the punishment should be so adjusted,

that for every part of the resulting mischief a motive may be supplied to restrain from committing the same fault again. Then the circumstances acting on the sensibilities of the offender should be taken into account, such as age, constitution, position in school, home influences, and so on. The idea is to make the punishment operate equally in all cases. Irrespective of other considerations, if the punishment is more likely to do harm than good, it should be omitted.

LIMITS OF PUNISHMENT.

Punishment should be inflicted only when necessary; and since it is intended to supply a counteracting force, weak punishments may be the worst. But a pupil should never be punished at the *moment of offence;* never when he is *not expecting it;* and for serious cases, always *in private*, so as not to degrade the offender. The motive should always be looked for, as it is that which has to be dealt with. Hence *punishment should only be given when the motive is bad.* This will exclude offences which are due to *weakness of will*, as when a child is sobbing through uncontrollable grief; or many accidents, *where the mischief or pain was not intended.*

It has been pointed out that punishment should only be administered where necessary. It is not necessary *where the evil done is over-weighted by a greater benefit;* or, where *the penalty has not come under the child's notice.* Instruction is required in such a case, and not punishment. The same is true when the child is *unaware of the consequences* of his act. Nor should punishment be given for any offence where the child is *not a free agent.* It is also unprofitable to punish where *the evil of the punishment exceeds the evil of the offence.* It is needless *when the end can be obtained in some other way*, as by instruction or persuasion. Such cases would include obstreperousness in boys, some forms of crying, and cases in which the discipline of consequences avails.

EVILS OF PUNISHMENTS.

I. Of Punishment Generally.

1. All punishment involves *suffering*, and as a consequence, is an evil It abates the sum of human happiness, and militates against the formation of happy associations with education. This it does, among other ways, by breeding *bad feeling* between the teacher and the scholar, at times, and by exciting and strengthening the *anti-social feelings* generally.
2. It is often *misused*. This is due to the ease and readiness with which it may be administered, and to the way in which it apparently obtains its immediate object. This misuse may include an *improper selection*, which may degrade the child, and so produce evil instead of good; or it may degenerate into the evil of *compulsion*.
3. It is often *insufficient* for its proper work. The fear of the punishment is often so great, that it is apt to be the first consideration with the child, and so the stimulative force of the punishment ceases with the particular action in question. The motive does not extend beyond the act itself, and so contributes nothing to the formation of character.

II. Objections to Corporal Punishment. John Locke gives the following:—

1. There is a natural propensity to indulge in corporeal and present pleasure. This wants rooting out. But corporal punishment strengthens the propensity by appealing to it. A child who abstains from any act through fear of corporal punishment only prefers a greater corporeal pleasure, or avoids a greater corporeal pain.
2. By association, it breeds aversion to that for which it is the teacher's business to create a liking.
3. It is a slavish discipline, and makes a slavish temper.
4. It often, as in severe cases, brings a worse and more dangerous disease—*it breaks the mind*. Instead of a disorderly boy, you get a low spirited, moping boy.

KINDS OF REWARDS.

1. **Place Taking.** This appeals powerfully to emulation, and so should be subjected to the same limits. It is, in the form of emulation, perhaps the most powerful known stimulant to intellectual work. But its defects are that it is

apt to be anti-social, or too energetic in its application, or limited to the gifted ones. It discourages effort in many, because it makes a merit of natural endowment, and in certain cases it even arouses envy. Hence it should always be used in moderation, and rarely, if ever, with young children.

2. **Decorations.** If these are used they should be of a simple character. They are a powerful incentive to action, as a little observation outside the school will show.

3. **School Privileges.** These include such things as the right to occupy certain places, to fill certain offices like those of monitors, curators, librarians of the school library, and the marking of certain forms of school work.

4. **Prizes.** These can take the form of books, certificates, medals, scholarships, etc. They are often valuable in themselves, and they are tokens of mental or moral superiority. But their effect varies, and they are only of limited application. They may stimulate rivalry, which is anti-social, or they appeal to the best of the social emotions —love for parents or respect for teacher, and the consequent desire to give pleasure by the gaining of a prize. Yet they often have a wider and worse effect. There is the bitter feeling of disappointment in the unsuccessful scholars, which may harden into indifference, and a subsequent lack of effort; or there is the arousing of jealousies, envy and a sense of injustice. A failure should be so utilised as to become a stimulus to further effort.

5. **Praise.** This is the chief means of reward for the teacher. It is a great power, and needs much care in its bestowal. It is a powerful incentive to the mind, and sets up a right association between right conduct and commendation. Later on the right conduct becomes a habit, which is sufficiently strong to exist independent of the association. In this way it becomes a powerful force in building up character.

EVILS OF REWARDS.

1. If used incautiously they may degenerate into *bribery*. Hence a wise use of them also includes an appropriate use.

2. Waitz observes that rewards are, in a certain sense, more dangerous to morality than punishments, for the latter at most only produce fear of evil, whilst the former *may make the positive stimulus of desire for pleasure the motive to duty.*

3. Rewards *need grading, and this is often too difficult* in the complexity and pressure of school discipline to receive proper and adequate attention. Tangible rewards are apt to *stimulate the lower feelings.* Praise or commendation is always welcome, but is not always considered adequate by the recipient.

4. Rewards are generally *misapplied.* They are too often bestowed on intellectual merit and too rarely on moral excellence. In this way they appeal to the love of rivalry, and so tend to become anti-social. They thus stimulate a love of excelling rather than a love of excellence.

MERIT AND DEMERIT.

The bestowal of rewards rests upon a proper recognition of merit and demerit. *Merit implies the performance of actions above the border line of duty; i.e.*, merit has to deal with virtue. *Demerit lies below the line of duty.* A proper use of rewards *confers them only on Merit.* We do not expect to be rewarded for doing our duty, although it may be necessary in some cases so to bestow them in early school life. But it is best always that rewards should be associated with desert, and desert only. *All children ought to be rewarded according to their deserts*, but in practice this is found to be impossible. The most skilful teacher can only approximate to it. The difficulties involved are serious. For instance, *ought the reward to be apportioned to the effort made or to the results achieved?* Most are agreed that it is the effort rather than the result, but most equally know that it is the result rather than the effort that gets the recognition. The reasons are all in favour of the effort, for as Sidgwick points out the results may have been due—

1. To favourable circumstances,
2. Or to fortunate accidents,
3. Or to natural endowment,
4. Or to special home advantages.

Again, some assert that rewards ought to be bestowed *according to the varying degrees of need*, for some children require much more encouragement than others.

The question of merit is affected by a too lavish bestowal of rewards. In such cases the child fails to associate the reward with real merit, and grows to look upon it as a right. Hence, as Waitz observes, it is advisable sometimes to *reward a child unexpectedly*, and not to let him count on a definite reward beforehand. In the same way distinguished merit should not always be commended. Silent recognition is considered best sometimes, and it is urged that any exceptions should be such as to extort admiration from the most jealous. In such cases the controlling force should be the class opinion.

SANCTION.

When we sanction a thing we ratify it and give it validity. The word is also used to indicate that which confirms or renders obligatory, hence it is synonymous with authority. But the word is also used to denote the penalty incurred by the infringement of a rule laid down under authority, and it is partly defined in this sense by Bentham, who explains it to mean **the pain or pleasure which is attached to a law.** He thus makes it include pleasurable as well as painful results. But Austin restricts the term to **the evil incurred when a demand is disobeyed.** Strictly speaking, it is a legal term, and means "**the punishment, by dread of which the command of the sovereign authority is enforced.**" We thus see that legal sanctions have nothing to do directly with the encouragement of right; they are only concerned with the prevention of wrong. But in ethics the wider meaning is the accepted one. It includes the pleasures which induce to conformity as well as the pains which deter. Bentham distinguishes four kinds:—

1. *Physical.* These are due to nature and act without human intervention.

2. *Moral or Social.* These are due to the spontaneous dispositions of our fellow-men, their friendship, hatred, esteem and so on.
3. *Political or Legal.* These are due to the action of the magistrate in virtue of the laws.
4. *Religious.* These supply motives outside the naturalistic theory of ethics. The fear of punishment and the hope of reward hereafter are strong motives with the great bulk of mankind.

THE TONE OF THE SCHOOL.

The tone of a school is the product of many forces. Every element in school life, and many outside it, are contributing factors to this one product. It embraces the whole range of school management, teaching, discipline, and includes questions relating to scholars, teachers, and even buildings and apparatus. If we regard the school as a living organism, **its tone represents its state of moral and intellectual health and vigour.** More particularly it refers to **the general or prevailing character of school morals, manners and sentiments.** In short it accurately reflects the temper or mood of the school, and it is to be felt rather than perceived.

The tone of a school is very largely under the influence of the teacher. Enough has already been said in this and previous chapters to show what means are at his disposal. In addition to the formation of habit, of moral training, of discipline, he must remember that organisation, classification and school economy all contribute their share of influence. Where the tone is weak we get all those evidences of what is generally called bad discipline, and which shows itself in faults of conduct as well as faults of character, in "breaches of discipline," such as lack of neatness and order, as well as in the more serious moral offences, such as copying and untruthfulness. The raising of the tone of a school is always a slow process, because it has to root out bad habits and bad principles before it can begin any constructive moral work. Some

evidences of improving tone, like punctuality, cleanliness and neatness, may soon show themselves under the rule of a skilful and determined teacher; ready obedience may even be given, but such results as cheerful and willing obedience, and the implanting of sound principles of conduct, will require more time, and must not be too readily expected. The greatest force both for improving and maintaining tone is the personality of the teacher himself. All other forces will be appreciably weakened unless this one great factor is all it ought to be.

PUBLIC OPINION IN SCHOOL.

A good teacher seeks to cultivate a healthy public opinion, because when properly guided it becomes a *moral force*, owing to the weight of its mass. It determines very largely the character of the scholars, both collectively and individually. *It is a supporter both of custom and law.* It expresses an unwritten code of honour, and makes it binding on all. It appeals readily to the impulse of *imitation*, and to the sentiment of *respect and authority*. It is this that makes the co-operation of the older scholars so important; for children more readily imitate those who are nearer to them in age, taste and feeling, than the more distantly removed teacher. There is also *more opportunity for its exercise* since it affects all. But care is required to avoid the risks of misapplication. The teacher is the head and centre of the school, and if school opinion is to be a moral force it must be formed around him. Hence the necessity for showing a good example, for exercising his authority with justice and wisdom, for remembering that he has to deal with the act rather than the doer of that act. Clear ideas of duty must be inculcated, a right sense of duty cultivated, a proper sense of honour developed, and all must be backed by a healthy public opinion. When the sanctions of the school community are inoperative or misdirected, there is a deadening of the moral sense, and a grievous failure in discipline. At the same time this force

must not be over-developed, or it will act with tyrannical effect, and crush out all individuality.

PUBLIC EXAMINATIONS.

These are not an unmixed blessing, but there are certain **advantages** attaching to them. They have a direct value in so far as they throw the pupils, for the time being, entirely on their own resources. They demand careful preparation and attention. They also test ability, although the ability tested may be as much that of the teacher as the examinee. They *may* test honesty, and they will always be some indication of character through the medium of neatness, style, thoroughness and care.

But they are attended by many **disadvantages.** Very often they are as much a test of physical strength as anything else. Some say they furnish no test of character, and in the sense meant it is probably true, for although they may keep out the fools they may let through the knaves. With some they certainly tend to substitute the love of excelling for the love of excellence, as has been previously pointed out. Their general weakness is that they tend to elevate mental ability above moral worth.

Summary.

Discipline.

1. Is more than the teacher's influence over the child.
2. Is a force for moral training.

Obedience.

1. *Slave Obedience*—the motive is weak.
2. *Mechanical Obedience* leaves the character weak.
3. *True Obedience* subdues the will without weakening it.

Authority.

1. It is not an end, but only a means.
2. Its operation is a necessary evil.

Moral Discipline.

1. Physical compulsion is not moral discipline.
2. The exercise of authority in prohibiting certain acts is not discipline.

3. It is subjection to the teacher's authority in accordance with the order which has been prescribed for educational ends.

School Discipline.

1. The teacher's authority is more limited than that of the parent.
2. The sense of dependence in the child is not so great.
3. The teacher's rule rests on justice.
4. Some authorities assert that public education surpasses domestic education as a means of strengthening character, and of developing energy and the manly virtues.
5. The sense of duty is the ruling force in school.

Home Discipline.

1. The parental instinct is the ruling force, hence home discipline is based on affection.
2. The motives to conduct are fewer than in the school.
3. Home affords more opportunities than the school.
4. Home relations tend to develop more moral habits than the school.

The Discipline of Consequences. The general principle is that natural punishments are best where available.

1. *Advantages.*
   (*a*) The punishment is a natural one.
   (*b*) It sets up a right moral standard.
   (*c*) It is a discipline of pure justice.
   (*d*) It minimises the risk of bad feeling.
   (*e*) It does not hamper the child's sense of freedom.
   (*f*) It strengthens the influence of both parent and teacher.
   (*g*) Generally the penalty follows quickly.
2. *Disadvantages.*
   (*a*) The penalty is not always available.
   (*b*) It is not always suitable.
   (*c*) It may be too remote.
   (*d*) It may be disproportionate.
   (*e*) It may be inadequate.
   (*f*) The chief penalty may fall on others.
   (*g*) It rests on a false principle. (Compayré.)

Discipline as Influenced by Temperament and Disposition.

1. Flexibility required in the discipline.
2. This involves a knowledge of temperament, etc.
3. Voluntary dispositions should be trusted as far as they will go.

Conditions Favourable to Discipline.

1. The favourable personality of the teacher.
2. Good physical surroundings.
3. Good school management. This includes:—
   (a) A good system of government.
   (b) The co-operation of the pupils.

The Ends and Grounds of Early Government.

1. To teach obedience, which is the law of a child's being.
2. To protect the child against himself.
3. To form good habits.
4. To keep order, for the acquirement of the mediate virtues (Herbart.)
5. To prevent as well as correct and punish.
6. To give proper facilities for child activity.

Necessity for Punishment.

1. Children require restraint.
2. There can be no law and no government without it.
3. A child must be made rational or obedient.
4. A necessary stimulus must be supplied.

Necessity for Rewards.

1. They supply an occasional stimulus.
2. They appeal to a feeling of pleasure.
3. The child's limited capacity makes other aids essential.
4. His social feelings are often too weak for effective appeal.

Kinds of Punishments.

1. Censure.
2. Disgrace.
3. Detention.
4. Deprivation of pleasure.
5. Tasks and impositions.
6. Expulsion.
7. Corporal punishment.

Corporal Punishment is the kindest method of dealing with certain offences (Rosenkranz), but there are serious objections against its use. See objections to corporal punishment (p. 384).

1. It should be used only as a last resource.
2. It should never be violent or dangerous.
3. It should not offend against the sense of modesty.
4. It should be accounted a great disgrace.
5. It should consider age and sex.

The Amount of Punishment. This must be regulated by:—

1. Its effect as a deterrent.
2. Its effect as a corrective.

Limits of Punishment.

1. It should be given only when the motive is bad.
2. It is unnecessary where the evil done is over-weighted by a greater benefit.
3. Also where the penalty has not come under the child's notice.
4. Also where the child is unaware of the consequences of his act.
5. Or where he is not a free agent.
6. Or where the evil of the punishment exceeds the evil of the offence.
7. Or where the end can be obtained in some other way.

Evils of Punishment.

1. It involves suffering.
2. It is often misused.
3. It is often insufficient or excessive

Kinds of Rewards.

1. Place taking.
2. Decorations.
3. School privileges.
4. Prizes.
5. Praise.

Evils of Rewards.

1. They may degenerate into bribery.
2. They make the positive stimulus of desire for pleasure the motive to duty.
3. They need grading, and the difficulty of doing this effectively often produces evil instead of good.
4. They are often misapplied.
5. A consideration of merit and demerit shows further difficulties and risks.

Merit and Demerit. The bestowal of rewards rests upon a proper recognition of merit and demerit.

1. *Merit* implies the performance of actions above the border line of duty.
2. *Demerit* lies below the line of duty.
3. Rewards should be conferred only on merit.
4. All children ought to be rewarded according to their deserts, but this is impracticable.

Sanction.

1. This is defined as the pain or pleasure which is attached to a law.
2. Kinds (Bentham):—
   (*a*) Physical or natural.
   (*b*) Moral or social.
   (*c*) Political or legal.
   (*d*) Religious.

The Tone of the School. By this is meant the general or prevailing character of school morals, manners and sentiments.

Public Opinion in School.

1. It is a moral force rightly directed, for it is a supporter of both custom and law.
2. It appeals to the impulse of imitation and to the sentiment of respect and authority.
3. It has more opportunities for exercise than the teacher's influence.

QUESTIONS.

1.—In teaching an infant class, now far would you rely on the principle of rewards and punishments? What would be the nature of them? (E. D.)

2.—What are the chief functions of punishment? Explain psychologically why natural punishments are (when possible) better than arbitrary ones. (E. D.)

3.—What is the object of punishment in school, and on what does its efficiency depend? Mention modes of punishment, of which you approve, to the kinds of offence to which each is suited. (E. D.)

4.—How does the obedience yielded by a child in school differ from the obedience of an adult to the obligations imposed by a sense of duty, and how can the teacher develop one into the other? (E.D.)

5.—A nurse, seeing a child run from her side toward the kerbstone, declined to stop it, preferring that it should fall, so that it might "gain experience." Within what limits is such a form of discipline justifiable? (E. D.)

6.—What is meant by the tone of a school? What are the chief means by which it can be influenced? (E.D.)

7.—State generally what you regard as the proper functions of rewards and punishments in education, and compare these with their legal and political functions. (L.U.)

8.—Describe briefly the chief non-intellectual sources of error. Consider generally how the young are to be preserved from the opposite evils of an undue deference and an undue regard for authority in matters of opinion. (L.U.)

9.—What qualities are required in a teacher to enable him to govern his school through his scholars? What practical rules should he lay down for himself as regards rewards and punishments to ensure this end? (L.U.)

10.—What qualities can examinations test, and what do they fail to test? (L.U.)

11.—Consider whether, having regard to the different stages in the development of character, it is necessary to adopt different methods of connecting rewards and punishments with acts. Describe the methods you consider possible. (L.U.)

12.—Compare the purpose and grounds of government in the case of the school teacher, the parent and the state, and show how these differences affect the range of the teacher's moral influence, and the limits of his power to punish. (L.U.)

13.—What do you understand by the tone of a school? On what does it depend? If it were low what steps would you take to raise it? (L.U.)

14.—Explain and briefly discuss the different views that have been advanced regarding the appropriate method of connecting punishments with actions, taking particular account of school discipline. (L.U.)

15.—How far do you think rewards permissible as stimulations to effort? What kinds of rewards do you think the most appropriate? (L.U.)

16. How would you secure the co-operation of your pupils in the maintenance of discipline? What disciplinary powers would you entrust to monitors? (L.U.)

17.—What do you understand by the public opinion of a school? (L.U.)

18.—Analyse the feeling of respect for authority, intellectual and moral, indicating the differences in the sentiment in the child and the educated adult, and suggesting how the teacher may best secure the full support of the feeling. (L.U.)

19.—Point out any ambiguities of the term discipline as applied to education (L.U.)

20. What are the principal rules of discipline? (L.U.)

21.—Estimate the bearing of a habit of obedience on the early development of character, and carefully distinguish a lax discipline from one which aims at a free self-submission to moral commands. (L.U.)

22. Bring out the meaning, with a concrete example, of the habit of obedience. (C.P.)

23.—What do you understand by the tone of a school? How far and in what ways is it under the control of a teacher? (C.P.)

24.—What is moral discipline, and how is it related to intellectual discipline? Explain psychologically the effects of a very severe, and of a very lax, discipline in the home or the school, on the growing character of a child. (C.P.)

25. Discuss the value of routine punishments for minor breaches of discipline (C.P.)

26. How would you deal with a case of insubordination? (C.P.)

27.—How is public opinion formed in school? State how you would endeavour to control and utilise it. (C.P.)

28.—Briefly discuss the bearings of rewards and punishments on the development of character. How is their effect modified by individual differences of disposition? (C.P.)

29.—What use would you make of the sixth form in the maintenance of discipline? Mention any dangers that are incurred in such a course, and state how you would guard against them (C.P.)

30. How should hasty temper and unpunctuality, or laziness and sulkiness be punished, and why? (E.D.)

31.—Her Majesty's inspectors are instructed to consider the degree of interest the children show in their work when they have to judge the discipline of a school. Show why this is properly to be considered as an essential feature in the discipline of a school. (E.D.)

32. A little girl was running down a steep hill, to whom a lady, walking with her mother, called, "Take care, my dear." The mother answered, "Let her alone. She must learn wisdom by experience." Discuss how far the mother was right or wrong. (E.D.)

33. What are the advantages and defects of allowing children to be punished by the natural consequences of their misdoings? (E.D.)

34. What limits would you set to the discipline of consequences in dealing with the young? (L.U.)

35.—What evil effects does Locke attribute to corporal punishment? How far does the prevailing sentiment of the present day support his statements? (L.U.)

36.—Give the general principles which, in your opinion, should govern the infliction of punishment. Illustrate the effects of remoteness and uncertainty of punishment. (L.U.)

37.—What are the advantages and disadvantages of place taking? What practical corollary should you draw as to the limits within which it should be used? (L.U.)

38.—Show how school punishments differ in principle from legal punishments. Is it possible in inflicting punishment to distinguish between moral offences and breaches of school discipline? (L.U.)

39.—What is the proper place of authority in education? In dealing with this subject you will take cognisance of (*a*) different classes of subjects (*b*) the different ages of your pupils (C.P.)

40.—Give a definition of punishment. What are the chief ends of punishment? What are the evils of punishment from an educator's point of view? Give some plain limits to the use of punishment. (E.D.)

41.—Explain precisely what you understand by merit and demerit (L.U.)

42.—What do you understand by a sense of justice? In what sense, if any, would you ascribe a sense of justice to a child of six? (L.U.)

43.—How would you deal with an obstinate child? (C.P.)

44.—Compare home and school education at their best in their influence on the development (*a*) of sympathy, (*b*) of a sense of justice. (C.P.)

45.—Define as precisely as you can, each of the following terms, and show how they are related: *Education, Instruction, Discipline, Training, Development.* (C.U.)

46.—The term *Discipline* is variously employed by writers on education. Discuss their views and select your own definition. (C.U.)

47.—Discuss in detail the principles which should guide a teacher in the administration of punishment, and the means by which the necessity for resorting to punishment might be diminished or avoided altogether (C.U.)

48.—Express precisely what is meant by, and implied in, training. Compare the characteristics of a child that has "run wild" with those of a child that has been "spoiled" (C.U.)

49—What opinion have you formed respecting the giving of lessons or impositions as punishments? Give your reasons (V.U.)

50—Discuss from the ethical standpoint the use and end of punishment (V.U.)

51.—Distinguish between government and discipline. On what principles must the former be based in order that it may gradually give place to the latter? (V.U.)

APPENDIX.

UNIVERSITY OF LONDON.

EXAMINATION FOR TEACHERS' DIPLOMA, 1903.

[SIX *questions to be answered,* THREE *from each section.*]

A.

1.—Distinguish the most important stages in the mental development of children How far does each stage require different methods of teaching?

2.—What are the psychological differences between the acquirement of knowledge and the acquirement of skill? Is the distinction ultimate from an educational point of view?

3.—Examine the maxim that education should proceed from the concrete to the abstract.

4. Discuss on psychological grounds how children may best be taught to attach precise and accurate meanings to words.

5.—"The primary root of all educative activity is in the instinctive impulsive attitudes of the child, and not in the presentation and application of external material." Discuss this.

B.

6.—The whole work of education may be summed up in the concept: "Morality" (Herbart). Discuss this.

7.—How far may acquirement of knowledge influence character? Do you regard any lines of study as specially important in this respect?

8.—Give a psychological analysis of firmness of will, distinguishing it from obstinacy. How far and in what ways may firmness of will be cultivated in the child?

9.—Trace the general course of development of ethical ideas and sentiments in children. How far is it advisable to give them formal ethical instruction?

10.—Examine the bearings of the psychology of the emotions on education.

1904.

[Six *questions to be answered*, three *from each section.*]

A.

1.—Examine different meanings of the term *interest*, discussing its relations to feeling, desire, purpose and activity. Does interest determine attention or does attention determine interest? Illustrate from educational work.

2.—How far and by what methods can the *general* power of observation be trained? Compare observation in this respect with other so-called faculties.

3.—Taking any kind of original work that might be expected from a boy or a girl between fifteen and seventeen years of age, consider how far and in what ways such work would involve (*a*) imagination, (*b*) conceptual thinking.

4.—Show how the power of a child may be gauged by his use and understanding of language. Deduce conclusions as to the methods according to which language should be taught.

5.—Compare the educational advantages of drill and of games.

B.

6.—"By practice the difficult becomes easy." Show how this applies to intellectual and to moral education.

7.—What do you understand by a "strong will"? To what extent and by what means can the acquirement of a "strong will" be promoted by education?

8.—Under what conditions is a general tendency to untruthfulness psychologically possible? Show how such a case should be dealt with educationally.

9.—How should expression of the emotions be treated educationally? Show how educational practice is related to psychological theory in this case.

10.—By what means may the teaching of history be made to promote the development of a normal child's moral nature?

UNIVERSITY OF CAMBRIDGE.

Teachers' Training Syndicate,

1903.

THEORY OF EDUCATION.

[Seven *questions only to be answered, including* one *at least from* B *and* one *at least from* C.]

A.

1.—Show how the different methods of psychological observation may be applied in the study of the child-mind.

2.—Describe the perceptual processes involved in *listening to a tune;* and compare them with those involved in *watching an experiment.*

3.—Examine the meaning of the term *Interest*, with special reference to the question as to how the teacher may utilise the previously developed interests of the child in order to widen and deepen his interests.

4.—Illustrate carefully the ways in which the several principles of association should be applied in teaching.

5.—Distinguish between *Imagination* and *Conceptual Thought;* and examine how far (*a*) it is possible, (*b*) it is desirable, that the latter should be developed apart from the former.

6.—What theoretical principles would you adopt in deciding upon the allotment of different studies to different parts of the day?

B.

7.—Bring out the logical principles that should be applied in exercising a pupil in a course of methodical comparison.

8.—Compare some deductive with some inductive science with the view of examining how best to prevent the most common fallacies in reasoning.

C.

9.—How far can it be maintained (*a*) that desirable emotions are encouraged by encouraging their natural expression; (*b*) that undesirable emotions are restrained by restraining their natural expression?

10.—Discuss from an ethical point of view the relations between Will and Habit.

1904.

THEORY OF EDUCATION

[Six *questions only to be attempted, including at least* one *from each of the sections* B *and* C.]

A.

1.—Compare the legitimate and illegitimate use of the term "faculty" in psychology. What educational evils are the natural outcome of the latter?

2.—Analyse the process by which a child acquires the mother-tongue. What general principles for teaching the mother-tongue are suggested by such an analysis?

3.—"Imagination is the crown of every education, as sound habits of mind and conduct are its throne. Comment, making clear the exact sense in which you understand "Imagination".

4.—Discuss the relation of remembering to knowing, bringing out the essential marks of a good memory.

5.—Analyse carefully an act of attention, showing to what extent it is an act of will. Apply your analysis to the determination of the signs by which a teacher can judge to what extent the attention of his pupils is directed as he would wish.

6.—Analyse the forms in which emulation may become a motive to exertion, and draw any practical conclusions that occur to you.

B.

7.—"Meaning is determined by context." "Meaning can be expressed in definition." Consider these statements in relation to each other, and their joint bearing on language teaching.

8.—"The possible limits of explanation are determined by the limits of knowledge in the person taught." Consider this fully in relation to (*a*) the nature of explanation, and (*b*) more or less satisfactory substitutes for explanation.

C.

9.—"Liberty of action is above liberty of desire. Reason alone can suspend its own action in time, can alone ignore habit—the acquired force. That is why reason and liberty are identical" (*Guyau*). Discuss this in its bearings on the government and training of children.

10.—A distinction has been drawn between school faults which merely call for the exercise of government and faults which require moral treatment. On what grounds and with what limitations is such a distinction valid, and in what ways should it affect a teacher's treatment of cases of (*a*) idleness, (*b*) copying, (*c*) impertinence?

OXFORD UNIVERSITY, 1905.

EXAMINATION IN THE THEORY, HISTORY AND PRACTICE OF EDUCATION.

[*Not fewer than* FOUR *and not more than* SIX *questions to be answered*: ONE *at least from each section.*]

A.

1.—Examine the claim of the theory of education to be a separate science.

2.—How far may the heuristic method be usefully employed by a teacher who is himself ignorant of the result to which the inquiry is tending?

3.—Determine on general grounds how the teacher ought to deal with emulation, love of approbation, and *esprit de corps*.

4.—Ought anything to be taught which a pupil will have to unlearn?

B.

5.—*Velle non discitur.* Discuss this formula with special reference to the ways in which the will may be influenced by teaching.

6.—Explain the psychology of the temporary memory produced by "cramming". What are its main differences from a type of memory which a philosophical view of education approves?

7.—Discuss the effects of bodily posture and material surroundings upon attention.

8.—*S'il l'apprend plus tôt qu'il ne faut, il court risque de ne le savoir jamais* (ROUSSEAU). Upon what psychological principles are studies to be graded?

C.

9.—To what degree should education take account of the future calling of the pupil?

10.—Is the end of education adequately expressed as "maximum efficiency," whether individual or social?

11.—"One foreign language because foreign; one dead language because dead. Comparative utility may then determine what foreign language shall be chosen; literary contents what dead language." Discuss this statement.

12.—*Paucis vivit humanum genus.* Ought education to have regard primarily to the production of a high average or to the supply of exceptionally equipped leaders? How far is it possible to maintain the view that in practice the two aims will coincide?

COLLEGE OF PRECEPTORS.

FELLOWSHIP, 1904.

1.—Illustrate the different ways in which sensational experiences may be said to be composite or complex; and examine how far a *physical* or *physiological* analysis of sensations bears upon their *psychological* analysis.

2.—Upon what conditions does growth in the power of discriminating sounds and colours depend? Compare the methods of training this power in the two cases.

3.—Consider the following dictum: "Any *relation* whatever between *objects* may constitute the condition of their *association*"; and give a precise definition of each of the *italicised* terms, showing how a classification of different forms of association can be based upon the dictum, and how it can be applied in educational method.

4.—In what ways does previously acquired knowledge modify the form in which new knowledge is received; and in what ways does newly received knowledge change the form of that which has been

previously acquired? Give the theory of the subject, and practical illustrations of its application in teaching.

5.—What has been learnt in regard to cerebral processes from the different phenomena of loss of memory in the department of language?

6.—Briefly define *Emotion*, distinguishing it from *Mood* and from *Sentiment;* and compare different principles according to which an exhaustive classification of emotions has been attempted.

Is the same kind of emotion always manifested in the same way?

7.—Show, with the aid of different illustrations, the precise conditions under which consciously purposive and deliberate actions tend to become partially automatic. Why in some cases does education aim at increasing the *automatic* and in other cases the *conscious* nature of the child's actions?

8.—Examine the connection between *sympathy* and *justice*, and between the methods of instilling these principles in the young.

LICENTIATESHIP, 1904.

1.—How would you distinguish, on some practically convenient principle, (*a*) between a *composite sensation* and a *simple percept;* (*b*) between a *simple percept* and a *complex percept;* (*c*) between a *complex percept* and a *process of observation?* Illustrate your answer by showing the different stages in childhood at which the different processes could be expected to occur.

2.—In what way is *interest* connected with *pleasure?* How far do you expect a child to take a special interest in studying things with which he has pleasant associations? Give practical illustrations.

3.—Why does the power of discriminative recognition of a thing depend upon Association: *e.g.*, the recognition of the particular note of a bird upon association with the hearing of its name or with the sight of its mode of flight? Give examples of the application of this principle in the training of Observation.

4.—Illustrate the principle that a sustained process of Attention involves both change and continuity.

5.—Give examples showing how development in the power of Constructive Imagination depends upon the exercise of Reproductive Imagination.

6.—Show how the general idea of a relation of agreement or difference between objects may arise in the mind of a child when

they are presented together. Illustrate from the teaching of some branch of Natural Science.

7.—Analyse the emotion of *courage*: comparing it with that of *fear*. How far and by what methods should the former be developed and the latter restrained?

8.—Explain and illustrate the distinctions between actions *with* the co-operation of the will, actions *without* the co-operation of the will, and actions *in opposition* to the will. Under what different kinds of conditions is a boy induced to perform a difficult task.

ASSOCIATESHIP, 1904.

1.—Illustrate ways in which the principle "From the simple to the complex," may be violated in the teaching (*a*) of arithmetic, (*b*) of history.

2.—Explain, with the aid of an illustration, the purposes and the methods of the Object Lesson, showing what activities are exercised by it in the mind of the pupil.

3.—Explain the relation between Interest and Activity, showing how far and under what conditions interest in the special activity that is being exercised is stimulated (*a*) by novelty, (*b*) by familiarity, (*c*) by change, (*d*) by continuance.

4.—Distinguish and illustrate the mental processes described (*a*) as the *apprehension of a relation of similarity*, (*b*) as the *association of similars*. Do the ideas of similar things ever suggest one another unless they have been previously *apprehended* as similar?

5.—In what ways does a child's power of imagination need to be strengthened? How far does the employment of modes and illustrations, etc., (*a*) weaken, (*b*) strengthen, the power of imagination?

6.—How does the general idea of (say) an oak tree differ from the perceptual recognition of an oak tree *as an oak tree*? Explain the method by which the power of forming such a general idea is trained.

7.—Distinguish between the activities exercised by the pupil in following (*a*) a *description*, (*b*) an *explanation*, given by the teacher in any subject.

8.—Explain the distinction between *Deductive* and *Inductive Inference*, and examine, with the aid of an illustration of each, the comparative advantages and disadvantages of the two as instruments in the early education of the reasoning powers.

SELECTIONS FROM VARIOUS EXAMINATION PAPERS.

OXFORD UNIVERSITY.

EXAMINATION IN THE THEORY OF EDUCATION, 1902-3-4.

1.—"No reception without reaction, no impression without correlative expression -that is the great maxim which the teacher ought never to forget." Explain and illustrate.

2. -"A child in his first years is to a very large extent self-educated." Explain this and consider how far school-education should consist in an attempt to continue such spontaneous self-development.

3.—In what way is it possible that a person should be the better for having acquired knowledge which he has since forgotten?

4. -"A teacher may contribute to ruin a pupil by giving him too bad an opinion of himself." Discuss from a psychological point of view the principles according to which praise and blame should be distributed.

5.—What may be the causes in different cases of "sullenness" or "wilful stupidity" in a pupil? On what principles ought the teacher to deal with such cases?

6.—What are the characteristics of a serviceable memory? How far and by what means may it be cultivated?

7.—How far is character capable of being determined by education.

8.—Show how a teacher can judge a pupil's character in the course of school work. Illustrate the opportunities so afforded of correcting particular failings and weaknesses.

9.—Give suggestions as to the best methods of securing a good "grounding" in grammar.

10.—In what way is it possible for school teaching to develop the imagination and to give it a useful direction?

11.—Explain what is meant by tne "power of observation". How far does the development of this power in one direction involve ts development in other directions?

12.—Discuss the proper blending of familiarity and novelty in teaching.

13. Give some account of recent attempts to classify types of character. Estimate the value of this line of research to the schoolmaster.

14.—Discuss the modes and the degree in which intellectual development may affect character.

15.—Discuss the use of suggestion direct and indirect as a means of moral education.

16.—"No greater virtue can exist in a child than independent effort to follow up and finish an unpleasant task." How may this virtue be best cultivated ?

17.—"No text-book is, of course, used in teaching Geography to the Junior Classes." Do you approve of this? How would you propose to put this principle into practice ?

18.—"A teacher must not attempt to do what can be done by the pupil for himself." Explain clearly in what respects this rule must be observed in dealing both with senior and junior pupils.

19.- "The object of Education is to train faculties." "The object of Education is to provide suitable direction for activities."

Contrast the spirit and aim of these rival conceptions.

20.—Examine the chief causes of inattention and their remedies.

21.—Consider the precise scope and limits of repetition in teaching. What light is thrown by researches into the psychology of memory upon the question of the most economic use of repetition ?

22.—Compare example and direct moral teaching as instruments in education.

23.—What is the distinction of a strong from an eccentric character? Consider the precautions to be used to secure the one and avoid the other.

24.—"A teacher must be interesting but not too interesting," "sympathetic but not too sympathetic". Explain the reasons for these injunctions.

25.—What do you consider to be the characteristic features of the scientific method? How may the teaching of science in schools be best made to inculcate the scientific method?

26.—Explain the connection between imagination and thinking. Discuss the uses and abuses of imagination in education?

27.—How far are self-consciousness and social consciousness (knowledge of others) interdependent? Consider the educational bearing of this interdependence.

28.—Discuss the merits of different forms of punishment for different classes of school offences.

UNIVERSITY OF LONDON.

EXAMINATION IN PEDAGOGY FOR INTERNAL STUDENTS, 1904.

1.—Discuss the place of the idea of self-realisation in a system of education, bringing out the true relation between the educator and the pupil who is at the same time realising himself and being educated by another.

2.—Explain what is meant by "temperament". Distinguish it from character. Give any classification of temperaments with which you are familiar, and state your view of the value of such classification to the teacher.

3.—Examine the Lange-James theory of the relations between emotion and its expression, and show the bearing of the theory on the work of the educator.

4.—Show how the subject-matter may be presented to a class in accordance with the laws of Logical Method in the case of any one of the following school subjects: (*a*) Mathematics, (*b*) Natural Science, (*c*) English Literature.

5.—Give an account of the development of the idea of the personality of the individual.

6.—What are the hindrances to continuous attention and how would you deal with them?

7.—How far in class teaching and management is it possible and advisable to discover and consider the individuality of the pupils?

8.—How would you deal in school with (*a*) obstinate children, (*b*) children of passionate temper?

9.—"Require a child to accept everything on faith and you make him a slave; reason with a child about everything and you make him a monster."

How would you secure the mean between these extremes in the teaching of (*a*) History, (*b*) Natural History?

THE VICTORIA UNIVERSITY OF MANCHESTER.

EXAMINATION FOR TEACHERS' DIPLOMA, 1904.

1.—Explain the use of language in thinking. By what means may clearness of expression be cultivated?

2.—Give a general analysis of the nature of emotion and consider the problem of repression and stimulation of feeling in school life.

3.—Indicate the chief differences between images and percepts. Discuss from the teacher's point of view the use and abuse of imagination.

4.—What is consciousness of self, and how is it affected by social intercourse? Make special reference to school life.

5.—Consider how far the desire for the good opinion of others may be legitimately used as a motive in education.

6.—Discuss the aim and the moral value of punishment.

7.—"It is because natural constancy of will is rarely found in children that formative influence has so much to do." Comment on this statement.

8.—Discuss in what way a teacher may lead a child to apperceive new ideas.

9.—"Grammar is the foundation of language; and the teaching of language, if it is to be sound, must begin with grammar." Discuss the validity of this rule from the point of view both of Theory and Practice.

EDUCATION DEPARTMENT (ENGLAND), 1903-4.

1.—Discuss the uses and dangers of questioning as a device in teaching.

2.—The code prescribes English as a subject of instruction in all schools. What is included in this term? Explain how far instruction in technical grammar is necessary and how a practical knowledge of the principles of grammar may be acquired.

3.—How far can subjects taught in the school be influenced by locality? Give examples of the way in which "local colour" can be given to a lesson.

4.—What are the chief hindrances which teachers meet in their endeavour to form the character of their scholars? How can they be overcome?

5.—For what purposes and within what limits may young people be called upon to exercise authority over scholars?

6.—How would you bring home to a class a general moral reflection—*e.g.*, convince a class of scholars above the age of twelve that one should not speak evil of neighbours behind their backs?

7.—How would you help a class to obtain a true concept of a "river basin'? Give four or five questions which you would use to ascertain whether the term is thoroughly understood or not.

8.—Discuss the theory that memory is strengthened by exercise. By what other means can we permanently assimilate knowledge?

9.—Compare, from the point of view of the cultivation of the character, the influence of home and school training upon young children.

10.—In what ways can a spirit of mutual helpfulness be cultivated among children in their school work?

11.—"The less a teacher speaks the more she will be heeded." Discuss this in its physical, moral and intellectual bearing on teachers and scholars.

INDEX.

PRINTED IN GREAT BRITAIN BY THE UNIVERSITY PRESS, ABERDEEN